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WITH

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By S. A. TISSOT, M.D.
Profeſſor of Phyſic at Berne.

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TO THE

HIGH, ILLUSTRIOUS, and MIGHTY LORDS,

THE

LORDS CHIEF MAGISTRATES, TREASURERS, BANERETS and SENATORS, of the CITY and REPUBLIC of BERNE.

High, Illuſtrious, and Mighty Lords,

TO the bounties already conferred, your Excellencies have juſt now added one ſtill more conſiderable, by creating in my favour an office as honourable as it was unexpected. Having no other method of ſhewing my gratitude, permit me, High, Illuſtrious, and Mighty Lords, to offer you in this public manner, the imperfect expreſſion of it, and be pleaſed to accept with indulgence the homage of this firſt eſſay of my academical labours in the profeſſorſhip you have entruſted me with. May Providence proſper this eſtabliſhment, and pour down its moſt precious bleſſings on the ſtate you govern, as well as on

the perſons of your Excellencies, the continuation of whoſe exalted benevolence I venture earneſtly to deſire.

I am, with the greateſt reſpect,

High, Illuſtrious, and Mighty Lords,

Your Excellencies

Moſt humble and

Moſt obedient ſervant,

LAUSANNE,
April 24, 1766.

TISSOT.

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neceſſity of having it reprinted under my own inſpection, that I might avoid the ſhame of having written ſo bad a book as the one that was publiſhed with my name to it; and which is certainly not mine, although the tranſlator has endeavoured to perſuade the public that it was, by the following falſe declaration in an advertiſement at the beginning of this incomplete pamphlet, which I knew nothing of till I ſaw it mentioned in a catalogue: "M. Tiſſot himſelf has been ſo kind as to look "over this tranſlation; he has approved "of the notes which have been added, and "we have made uſe of his remarks with "thankfulneſs (*b*)."

I only intended at firſt to have corrected it by the original, and juſt to have given a faithful tranſlation of it; but this I found impoſſible: ſo that being obliged to throw

(*b*) It were much to be wiſhed that all tranſlators would do what this one pretends to have done, and would conſult the authors themſelves, as moſt of the tranſlators of the Avis au Peuple have been kind enough to do; the public and the author would both be benefited by it; but it is an affront which calls for reproof, for any one to give it out that it has been done, when it never has. I have juſt ſeen, with much concern, that this tranſlation is reprinted in Holland, by Meſſ. Rey, in the Extraites des meilleurs Journaux de l'Europe, combined with the Journal des Sçavans, January, 1768. And I beg the favour of all gentlemen who are concerned in the Journals, to make my diſclaiming of this tranſlation known to the public.

it

it into a new caſt, I determined to inſert all the corrections and additions deſigned for the new Latin edition; it may therefore be looked upon almoſt as a new work; but which will unfortunately appear to a diſadvantage from the quickneſs it has been compoſed with, in the midſt of continual interruptions: this, together with the ſending away each manuſcript ſheet to the preſs as ſoon as it was finiſhed, has been the occaſion of many inaccuracies and repetitions in the language; for which I beg the reader's indulgence, who will certainly think that I ſtand in need of it, on many other accounts.

Although there are many writings extant upon the diſorders incident to the learned, yet I may venture to ſay, that the ſubject is ſtill almoſt new; and I hope that experienced men will not find it quite the ſame, after having read this diſſertation. That of Rammazzini upon the ſame ſubject, and eſpecially ſome articles in one of the late M. Platner, are almoſt the only works in which we find it conſidered in ſome of its true points of light: but M. Ramazzini had only repreſented a few of them, and M. Platner, who would certainly have exhauſted the ſubject if he had made it his buſineſs, has only touched upon it as it were *en paſſant*; and yet he ſeems to have been the author who had the beſt conceptions of it. The large volume publiſhed

by the late M. Pujati, an eminent profeſſor at Padua, who has given us other excellent performances upon this intereſting ſubject, is nothing more than a compilation of general dietetic rules, without any new obſervation, or any circumſtance relative to the ſtate of the learned (*c*).

I have endeavoured to point out all the particulars, with regard to health, which diſtinguiſh the ſtate of the learned from that of other ranks in ſociety, and have explained their effects as clearly as poſſible; I have concluded with directions which appeared to me beſt calculated to leſſen the dangers of this kind of life, which can never be ſo wholeſome as might be wiſhed; and I ſhall be well ſatisfied if that reſpectable part of mankind, which dedicates itſelf to the inſtruction of others, ſhould here be able to find ſome advice, the obſervation of which may diminiſh the evils they are expoſed to by their profeſſions. They might perhaps themſelves contribute to make this work more perfect, if they would be kind enough to communicate the important obſervations they may have been able to make upon their own ſtate.

There is nothing new in the part concerning diet; almoſt all the advices I have given, may be found in all the authors who have written on the methods of preſerving

(*c*) Della Preſervatione della Salute de Letterati. Venez. 1762.

health.

health. But if we acquire eminence by publiſhing new truths, ſo on the other hand we make ourſelves uſeful by collecting thoſe which are known, for the benefit of the perſons to whom they are neceſſary; and ſurely one is as good as the other.

Although it becomes more and more the cuſtom to leave quotations out of French writings, yet I have preſerved them, becauſe they appear to me uſeful. Authors who exhauſt their ſubject, and leave nothing for their ſucceſſors to ſay upon it, may do without them; their works are complete buildings, which will never be touched again: but unfortunately this is not the caſe with me, any more than with many others, and therefore I think it right to produce quotations, that if any one ſhould chuſe to go on with the ſame taſk, he may find out more readily from whence information and aſſiſtance may be had. I have not done it in performances which are only the reſult of my own obſervations; but when we apply the remarks of others to our own uſe, there is certainly no impropriety in giving them the credit, by a few letters at the bottom of each page, where they cannot be inconvenient to any body.

LAUSANNE,
April 8, 1768.

PREFACE

BY THE

ANNOTATOR.

IT appears from the celebrated author's preface and Proemium to this ingenious treatiſe, that the foundation of it was an inaugural oration, delivered upon an occaſion very diſtinguiſhing to himſelf. The only cuſtomary publication of ſuch performances conſiſts in preſenting printed copies to the different profeſſors and members of the univerſity, and to the orator's private friends; and it is very unuſual to ſee any of them tranſlated into a different language. We learn however from Dr. Tiſſot, that a French tranſlation of the original Latin, (which is ſhorter by two-thirds than the preſent work) compelled him to his own greatly improved and extended French tranſlation of it, which he calls a new book. He affirms at the ſame time, that tranſlation publiſhed at Paris to

be a deteſtable piece, which he diſa-vows, and ſeverely remonſtrates againſt; having convicted the anonymous tranſ-lator of a poſitive falſhood in his pre-face to it. Hence we perceive that a writer's juſt reputation may ſuffer a very unjuſt diminution, from the ava-rice, the precipitancy, or ignorance of an incompetent tranſlator, or editor.

But as public utility has ſometimes reſulted from private evil, our ſtudious and literary readers, who ſhall receive either benefit or entertainment from this Engliſh tranſlation of the author's extended conſideration of his ſubject, will owe it, perhaps entirely, to this injurious abuſe of his name, and of his original performance. The doctor had favoured me, doubtleſs among many others, with a copy of that purely claſſical and elegant oration, full two years ſince: but I ſhould never have imagined, that the juſteſt tranſlation of it, exactly in that form, could have been a judicious attempt here: and from a diſcernment of his particular addreſs, of the ſcope and the occaſion of it, I ſhould have judged it indeli-cate too.

A deſire to avoid any imputation of this kind induced me to decline the tranſlating a book, which the author thought himſelf conſtrained to publiſh, in his own vindication. A want of adequate leiſure concurred to co-operate with my ſcruples; and my juſt attention to his arguments, which eſtabliſh the inſalutary effects of that aſſiduous ſtudy, which excellent tranſlations, if long, may require, entirely determined me to abſtain from it. Yet as Dr. Tiſſot's truly reſpectable name had ſufficiently excited the curioſity of the public, I could not decline the requeſt of a very reputable bookſeller, to prefix a preface, and to add ſome notes to the tranſlation of the work. This gentleman's requeſt was probably grounded on the former indulgence of the public to my tranſlation of his Avis au Peuple, and to my notes upon it.

An averſion to intrude my ſickle into another's harveſt, obliges me to repeat here, that I have no pretenſion to the merit of this tranſlation, having only read the firſt ſheet of it in MS. with any attention, and taken the liberty

berty of making a few verbal alterations in it. Even theſe perhaps might have been leſs neceſſary, as I am informed the gentleman, who has tranſlated the treatiſe, ſpeaks the French language very fluently, and is probably better acquainted with its idioms than myſelf.

Notwithſtanding the addreſs and ſcope of the preſent treatiſe are certainly more limited than thoſe of the former, yet is the ſubject of it, if duly regarded, not much leſs important. The health of the people, the multitude, whoſe corporal and manual labours procure the many neceſſaries and conveniencies of life for all; and whoſe numbers, whoſe vigour and induſtry conſtitute the ſtrength and wealth of a ſtate, is certainly a moſt fundamental object. *Salus populi ſuprema lex* is as juſt in phyſics, as in politics; for the moſt complete and extenſive natural and political health muſt conſiſt in the greateſt majority of individuals, who are happy in the poſſeſſion of both. But this being admitted, the health and ſanity of thoſe, to whom nature has confided talents for regulating and informing, for benefiting

nefiting and adorning ſociety, muſt be of the next immediate ſignificance. We are told, that of ſuch in China, all the magiſtracy and every perſon in public employments muſt conſiſt; after they have properly acquitted themſelves throughout a ſtrict examination of their various and requiſite qualifications. Nor is it in the leaſt ſurpriſing, that ſo wiſe a people ſhould thus ſubſcribe to the natural ſuperiority of men, who are enabled by their faculties, and their conſequent attainments, to feed, to furniſh, and to array the everlaſting mind; in compariſon of thoſe, who are provided, in much greater numbers, to contribute to the conveniencies as well as neceſſaries of life, to ſow and reap, to hew wood and to draw water.

Our moſt humane phyſician having formerly, to the ſatisfaction of all Europe, conſulted the health and preſervation of ſuch laborious multitudes, he ſeems, by this preſent tract to have divided his ſpecies into the two claſſes we have juſt inſtanced, and to have devoted his lateſt care to the health, the ſanity, and longevity of thoſe, whom

whom nature has diſpoſed and devoted, as it were, chiefly to mental labour. Yet although the faculties and the ſeat of them ſeem ſolely exerciſed in this order of men, during their ſtudies, and their bodies are but too much at reſt, they afford us abundant proofs of the certainty of Solomon's obſervation—"That much ſtudy is "wearineſs to the fleſh." This very perceivable fleſhly wearineſs is felt, as though it were reflected inwardly upon the faculties, which become torpid and inactive from laſſitude, and ſuggeſt ſome notion to us of that incumbrance with which matter repreſſes mind. I find it eaſier, methinks, to conceive, that the faculties may *appear* to languiſh, in conſequence of the very aſſiduous and intenſe exerciſe of their correſpondent organ, than that the powers of the ſoul itſelf may ſink, from her own exertion of them, abſtracted from the fatigue and obtuſeneſs, which that exertion may impreſs on her inſtruments. The ſun is not deprived of its intrinſic ſplendor by the intervention of the moon, though it is concealed from us by the interpoſition

ſtion of that great opaque body. Thus our mental deficience, or eclipſe, is ſimilarly manifeſt by privation; but the obſcuring cauſe is moſt probably material; reaſon ſtrongly ſurmiſing, what we are divinely aſſured of—" That " the ſpirit is willing, but the fleſh " is weak." Such reflections, however may naturally diſpoſe the moſt thoughtful and contemplative to be conſiderably eaſier about their inevitable ſeparation.

But as long as we endure in their combination here, it will be expedient, both for the health and credit of the ſtudious and literary themſelves, and for the better information and ſervice of the public, that writers particularly ſhould be careful to " mark," as our excellent ethic poet ſays, " the " point where ſenſe and dulneſs " meet," ſince all produced beyond this critical limit muſt impair their health, and expoſe their deficience, in a greater degree. The devourers of books, who exhauſt themſelves only by reading, ſhould deſiſt as ſoon as they find their comprehenſion more than commonly ſlow, their ſight

moaty

moaty and dimmiſh, or their eyes hot and watery.

The many ancient and modern examples Dr. Tiſſot gives of the morbid or fatal effects of exceſſive ſtudy, abundantly illuſtrate his reaſoning, which is ſtill farther confirmed by his own autoptical experience, and that of his learned medical friends. Our Philoſophical Tranſactions, and the phyſiological parts of many foreign literary Ephemerides, would furniſh ſeveral more to the ſame purpoſe; and in my notes I have ventured to add a few, from my own knowledge, which probably affect each perſon more ſtrikingly than thoſe from another's. It would be erroneous, I thought, to have either quoted or referred to more already publiſhed: our author's are well ſelected and ſufficient; and whenever a point is ſufficiently eſtabliſhed by many well authenticated facts, a dozen may be equivalent to a hundred, which muſt be tireſome. He particularly diſſuades, with much reaſon and energy, that moſt pernicious exceſs of ſtudy, which is extended by candle-light, into the hours of reſt.

The

The great Milton's loſs of ſight is principally aſcribed to extraordinary lucubration: and many have found that ſlowneſs of apprehenſion, and faultering of memory, which they ſuffered at the cloſe of a very applying day, entirely removed by the ſucceſſion of a whole night's eaſy reſt.

No particular preſcriptions are annexed to this, as to the former treatiſe, though mineral waters, chiefly chalybeates, the bark, cold bathing, and gentle evacuations, are occaſionally recommended. The evident reaſon of this is, that Dr. Tiſſot does not ſtrictly addreſs himſelf here to perſons actually ſick, but to thoſe who are too likely to make themſelves dangerouſly ſo. To ſuch he gives that moſt eſſential good advice of reſolutely diſmiſſing, or greatly diminiſhing, the peccant cauſe, or habit, that they may have no occaſion for any medicine; and without a removal, or great diminution of which, at the long-run, all medicine muſt be unavailing. For notwithſtanding gently ſtimulating, and ſometimes evacuating phyſic may leſſen ſome obſtruction, or lighten

ſome

ſome load, that nature did not duly attend to, when her functions were impaired, or ſuſpended, by an obſtinate perſeverance in ſtudy; yet while this primary habitual cauſe continues, with all its inveteracy, ſuch temporary aid muſt be merely palliative and frivolous.

The particular occaſion of this book, and the learned auditory to whom it was addreſſed, give entire propriety to the ſubject our medical orator had ſelected. They alſo incited him to indulge his phyſical genius and erudition, and to theorize, with congruity and elegance, on a ſubject ſo locally, and yet ſo extenſively intereſting. He had, with great conſiſtence, abſtained from expatiating in the ſame agreeable manner, in his Advice to the People [tunc non erat his locus] by ſacrificing his power of pleaſing to his ardour for doing good. On a different occaſion, and from a different addreſs, he reflected, the art of writing was, in other terms, the art of engaging ingenious perſons to read: and he knew, that what we hear or read with pleaſure does not only *not* fatigue us, but ſeemingly recruits the ſpirits,

ſpirits, by regaling the intellect, or the imagination. The oppoſite emotions which a reader of judgment and taſte experiences, in peruſing an excellent well-wrote work, and the very contraſt to ſuch a one, are ſtrongly legible themſelves in his aſpect and geſture: and yet we ſeem incapable of conceiving, what different modifications of organical motion may occur in the brain, from ſuch oppoſite affections in the mind. It is natural however, in ſuch caſes, to ſuppoſe ſome impenetrable variety and contrariety of them; as all the paſſions are diſtinctly ſignified in the countenance; and vehement terror and ſurpriſe have been ſometimes known to excite ſudden diſtortions of the viſage, or even horrid convulſions of the whole human ſyſtem. In fact, thought and contrivance appear perſonated, as it were, in ſome very expreſſive faces. I have known a gentlewoman of a moſt active mind, who, when intenſely thinking, had all the nervous filaments of her forehead, and part of her viſage, as viſibly twitched and agitated, as the

wires

wires of a harpſichord are, when vibrating ſome ſprightly air in muſic.

But to deſcend to my own annotations (always * ſubſcribed K. and having figures prefixed, inſtead of letters or any other marks of reference) in which I have endeavoured, however inadequately, to accompany this learned and moſt humane phyſician, I muſt refer their little merit, or their want of any, to the arbitrement of the public, who have been, more than once, very indulgent to me: but eſpecially to our readers of that claſs, to which the work is expreſsly devoted. My vanity has been too much flattered by the many proofs which have occurred, of a ſtrict coincidence of my judgment with that of ſo eminent a phyſician. Yet as this has not occurred without an exception (according to the proverbial difference among doctors) I thought my devoirs to the public obliged me, rather to a general ſincerity than to a perſonal complaiſance,

* All notes, quotations, and references without any ſignature, are re-printed exactly from Dr. Tiſſot's tranſlation, and muſt be aſcribed to his own reflection and reading, or correſpondence.

where

where I imagined (however I may have deluded myſelf) my own opinion to be better founded on facts. This has chiefly, if not ſolely, happened in the article of tea, on which I apprehend my note may be thought too prolix: and I have little doubt of our readers differing as conſiderably as ourſelves, juſt as they may have found tea more or leſs agreeable to their various conſtitutions and palates.

For the reſt of my little ſhare in this adventure, I have, in imitation of the author, taken a different track from that I purſued in my notes to the former work, where our common intention was, to expreſs every thing in the moſt familiar and plainly intelligible terms. But in an addreſs to the ſuperior, though much leſs numerous, claſs of readers, who are the natural patrons of this book; and who, from their own elegance, cannot be entertained with a total want of any, I have wiſhed not to depreſs either the ſentiment, or its expreſſion, too much beneath their attention. I have occaſionally ſtarted a very few curious queries for their purſuit and ſolution, of which

I think myſelf leſs capable. To entertain the ſtudious and literary a little, I imagined, would be coinciding with the tutelary intention of the work, as it would fatigue them leſs. A moderate indulgence to the innocent excurſions of the imagination is likely to prove a wholeſome and relieving variety to a brain, long agitated by a vehement exerciſe of the reflecting and intellectual powers. By tending to wear and exerciſe the organs of the mind more equally, it may guard againſt that inſanity or ſtupor, which has ſometimes invaded men of conſiderable parts, who have too deeply immerſed themſelves in meditation on abſtruſer ſubjects. The ſalutary ménage of the faculties of diligent, of learned, and ingenious men, muſt be of ſome importance to each community, and of preſent credit and ſatisfaction to themſelves. To venture much farther, it ſeems highly probable, that the liberal application and employment of great abilities, on every uſeful ſcience, have a tendency to elevate their proprietors, by the moſt natural gradations, into the poſſeſſion of what Solomon emphatically terms

WIS-

WISDOM: "For rarer than the "ſcient are the wiſe." After their utmoſt penetration and attainments, in their various reſearches, they are conſcious of an impenetrable *plus ultra* which refers them, with humility and veneration, to this. The ſummits, the pinnacles, of all truly philoſophical diſquiſition, point to, concenter and terminate in it. This is that final wiſdom, which conſtitutes conſummate happineſs and knowledge, where ſtudy will probably be ſuperfluous, but certainly unfatiguing, ſince pain and labour muſt ceaſe.

J. K.

ON THE

DISEASES

OF

Literary and Sedentary Perſons.

HAVING been appointed to introduce a ſcience into this univerſity, which, until the preſent time, had no profeſſor in it, I purpoſed, on the occaſion, firſt, to have obſerved the various relations which medicine has to the other ſciences, that have been taught here for many ages with great reputation and ſucceſs; and afterwards to diſplay both the advantages it derives from, and thoſe it reciprocally communicates to, them.

It would have been very agreeable to me to declare, in this public manner, the many important precepts in which medicine (1) coincides,

(1) The French words "combien de choſes impor-"tantes elle emprunte de la religion," literally ſignify how many important things it (phyſic) borrows from religion; which is rather bald in our idiom. The whole ſentence, however, I think, refers to that

coincides with religion; and entirely to have ſilenced thoſe ſhameleſs impoſtors, who have dared to calumniate phyſicians with a total want of any. My ſatisfaction would have been ſtill increaſed, by diſplaying the many lights reflected on religion by a ſcience, which, from a thorough ſcrutiny into the phyſical ſtate of the moſt perfect creature, from the admirable mechaniſm of a man in health, and perhaps the ſtill more ſurpriſing recovery of one from ſickneſs, eſtabliſhes the moſt unanſwerable demonſtrations of the exiſtence, and of the infinite wiſdom, of his Creator. In truth, were it poſſible to ſuppoſe every notion of a Deity effaced in the minds of men, phyſicians would ſpeedily revive in them the ſublime ideas which their profeſſion affords them of that Eternal Being, of whom none (if a phyſician may be permitted to affirm it) have conceived and reaſoned more competently, or with greater impreſſion and dignity.

What a number of authorities might I quote in vindication of this ſentiment! I muſt not, however, omit our father Hippo-

general temperance, that regulation of the paſſions, and that chearful and ſerene benevolence of diſpoſition, which religion enforces. All theſe are likewiſe recommended by phyſicians, as greatly conducing to bodily health, and to that eaſe and ſanity of mind, which tend to confirm and extend it in the preſent life; while both concenter in the great object of religion, the perfect and beatifying fruition of the next. K.

crates,

crates, who firſt argued againſt the exiſtence of chance, and maintained, that all events which were called fortuitous, were directed by the will of the Almighty (*a*).

(*a*) If the religious ſentiments of Hippocrates have been called in queſtion by ſome, they have been as powerfully vindicated by others. John Stephano, a Venetian phyſician, publiſhed at Venice in 1638, a very intereſting work, entitled Hippocratis Coi Theologia, wherein he proves, that the tenets of this phyſician, as well as thoſe of Plato, Ariſtotle, and Galen, agreed much with the Chriſtian religion; and in 1688, M Drelincourt gave a Greek oration upon the ſame ſubject, which has been tranſlated into French. At the beginning of this century, Mr. Grundling, profeſſor at Halle, publiſhed, under the title of Leiſure Hours, a collection of diſſertations in the German language, one of which was intitled Hippocrates Atheiſt; but M. Goelicke in his oration, and afterwards in his Hiſtory of Phyſic; M. Triller, in a Latin courſe, intitled Hippocrates falſely accuſed of Atheiſm, lately reprinted in the collection of his Opuſcula, with conſiderable additions; Mr. J. Le Clerc, in his Vive Anc. & Moderne, t. 15, p. 428; M. J. A. Schmid, in a diſſertation printed at Helmſtadt (the Religion of Hippocrates;) and laſtly, M. Fabre, in ſome remarks in the 13th volume of his Bibliotheca Græca; have all of them ſo fully refuted theſe heinous accuſations of Hippocrates, that the uprightneſs of his religious ſentiments can no longer be called in queſtion. Wherever he ſpeaks of any thing relative to the Deity, he does it as a man filled with the moſt profound reſpect for that awful Being. Is it poſſible, indeed, that any perſon ſhould be more thoroughly convinced of his exiſtence than phyſicians are? Do they not behold him every where? and do not the wonders of his works fall every inſtant under the notice of their ſenſes? Perhaps it may even be ſaid, that divines meditate on God, and that phyſicians behold him.

Neither muſt I omit Galen, a writer next in fame to Hippocrates, who has proved in a very circumſtantial manner, that the actions and uſes of the different parts which compoſe the thumb, are a ſufficient demonſtration of the exiſtence of a God; and who calls his book De Uſu Partium, &c. a monument erected to the glory of that Being (*b*). Nor muſt Polychreſtus be forgotten, whoſe great piety recommended him to the glorious title of the "peculiar friend of God (*c*):" nor Boyle, who not only wrote many excellent things himſelf, but alſo by a pious foundation bequeathed a large fund, in order to engage the moſt learned men in England through all ages, in defence of natural and revealed religion, againſt infidels and unbelievers. Should I not alſo mention his friend Sydenham, the modern Hippocrates; the immortal Locke; the great Boerhaave; and the celebrated Hoffman, a man truly pious, though not entirely free from ſuperſtitious opinions? Neither muſt I paſs over in ſilence thoſe of our own time; amongſt whom Mr. Tralles, who has ſo completely refuted the ſophiſms of La Mettrie, cer-

(*b*) Galen ſeems quite as religious as Hippocrates; and although two paſſages are found in his works, one of which attempts to invalidate the proofs of Chriſtianity, the other ridicules the attachment the firſt Chriſtians had to their doctrine; it does not certainly follow from hence that Galen was an atheiſt, but only that he was not a Chriſtian.

(*c*) ΘΕΟΦΙΛΕΣΤΑΤΟΣ.

tainly

tainly deſerves our notice (*d*); as well as Mr. De Haller, who with an energy peculiar to himſelf, has given us a diſcourſe upon the dangerous principles and fatal conſequences of irreligion; and has contraſted them with the fundamental truths and happy effects of Chriſtianity (*e*). It is true, indeed, that the more enlightened phyſicians are, the leſs will they be liable to be infected with (z) ſuperſtition, or the extravagancies of popular enthuſiaſm, or to be ſeduced by the workings of a diſordered imagination, which any teacher may lay down as the rule of truth, becauſe it is his opinion. On the contrary, they laugh at theſe phantoms, and are not contented to embrace the ſhadow of truth inſtead of its

(*d*) Anima humana, &c.

(*e*) Diſcours ſur l'Irreligion, à Neufchâtel, 1755.

(z) I hope I may be pardoned for preſuming to cite in this place, what I have formerly publiſhed on this material point. "Hippocrates, in treating of the "qualifications of a phyſician, ſays he muſt neceſſa-"rily be acted (i. e. in conſequence of his obſerva-"tions) by a continual reverence of the Gods: tho' "he ſuppoſes him, at the ſame time, free from ſu-"perſtition and avarice. Nor is there much impro-"bability in ſuppoſing ſo truly capable, ſo reflecting "and attentive a perſon, (though he might not chuſe "to publiſh his diſbelief of the religious mythology "of his country) to have been ſecretly as ſuperior to "polytheiſm as Socrates publicly was, and as Plato, "Tully, Cleanthes, and ſome other pagan philoſo-"phers have reaſonably been ſuppoſed." Anal. p. 393. The paſſages in proof of theſe ſentiments of Hippocrates are taken from his tract concerning elegance. K.

ſubſtance. Hence ariſe the many accuſations, the many bitter invectives and calumnies, which have been always outrageouſly miſapplied to thoſe who have the leaſt deſerved them.

I ſhould have pointed out with no leſs (3) ſatisfaction the ſtrict connections, nice dependencies, and perfect concatenations by which the ſcience of morals and that relating to health are reciprocally united; and ſhould have entered upon this track with the greater confidence, as it has been already trodden by our two greateſt maſters, Hippocrates and Galen. The firſt, in his ſmall treatiſe on diet, endeavours chiefly to prove, that the ſouls of all men are (4) alike,

(3) Our elegant readers will obſerve with pleaſure, throughout this introduction to his ſubject, the learned author's addreſs, in but wiſhing or aſpiring, as it were, to effect, what he ſummarily does. This profeſſed ſelf-diffidence is apt to increaſe the good-will and attention of an audience: being a figure that often occurs in ſome claſſical writers, particularly the orators, and is termed by the Greeks, Tapeinoſis. K.

(4) It is ſufficient for our author's purpoſe here, that Hippocrates had ſaid this, or ſomething pretty parallel to it. But we are not to infer, that Dr. Tiſſot admits the equality of all human ſouls, and ſuppoſes they differ only in conſequence of the different ſtate of the ſame organs in each individual, to which the ſoul is united, and through which it muſt be ſuppoſed inſtrumentally to operate. This doubt has never been ſolved, nor probably will, in the preſent ſtate, being rather metaphyſical than inveſtigable; no perceivable diverſity appearing in the brain of a genius and of a dunce (ſuppoſing neither to have died through

alike, and accounts for the difference obſervable in their underſtandings, from the exceſs or moderation of their appetites.

The ſecond has ſucceſsfully demonſtrated the influence the various diſeaſes of the body have upon the faculties of the ſoul. There are now more than ſixteen centuries elapſed, ſince he deſired, that philoſophers, who were intruſted with the education of young perſons, would conſide ſuch as were irregular in their conduct to his care. "Let thoſe, ſays he, who doubt "whether ſome can be reſtrained, others "ſpurred on, ſome become incontinent, "others ſober, enterprizing or timorous, "mild, modeſt or moroſe, according to the "difference of their food; let them apply "to me to ſettle what diet may be neceſſary "for them; and they will ſoon find themſelves better diſpoſed to natural philoſo-

through any diſeaſe of that organ) to enable the moſt ſubtile anatomiſt to determine even probably on the matter. This does not conclude, however, there may not be many invifibly important and very energic differences of the ſame organ in different ſubjects; the tubulofity of the brain itſelf being aſſumed merely from deduction and analogy, which do not ſtrictly deſerve the appellation of knowledge. Some eſſential diverſity, nevertheleſs, or gradation of human ſouls, ſeems leſs difficult, I think, to conceive, and is more reconcilable to religion and ſublime philoſophy. That the faculties are affected by the different ſtate of the brain and its emitted chords, or ducts, (from various cauſes) is indiſputable; but this, being a morbid effect, doth ſcarcely lead to any ſolution of the grand difficulty. K.

"phy, and more capable of improving the "powers of a rational ſoul, when I have "ſtrengthened their ſagacity and memory "by theſe means, and that they are become "more knowing, and more ready to ap-"ply. For beſides what relates to their "food or drink, I will alſo teach them "the influence of the winds, the nature "of the atmoſphere which ſurrounds us, "and point out to them thoſe places which "are beſt adapted to their conſtitutions, "as well as thoſe which they muſt a-"void." (*f*) (5)

How largely ſoever I might have expatiated upon this ſubject, it would ſcarcely have

(*f*) Quod animi mores, corporis temperamenta ſequantur, cap. 3. Charterius, tom. v. p. 457.

(5) The effects of a truly judicious diet and regimen, even in a ſtate of health, may poſſibly extend its influence to the mind; and co-operate, with good precepts and examples, to ſome improvement of the ſentiments and conduct of youth, as the paſſions may be rendered leſs active and rebellious, by the temperature of the blood. It is highly probable nevertheleſs, that Galen promiſed here to the very utmoſt of what he and food, ſuppoſing him to allow a ſufficiency of it, could effect; nor is it neceſſary to ſuppoſe our ſenſible author, who refers to him, believed the utmoſt of all he profeſſes here. We were intended by Providence for diverſe, though not for evil, characters; and nature will generally recur, in ſpite of diet, to her connate propenſities and paſſions; the regulation, not the extinction of which, is the object of education and philoſophy. Mr. Prior's dietetical argument in his Alma is very entertaining at leaſt, and not inappoſite here, whatever credit he might ſeriouſly allow it.

Was

have been poſſible to take notice of all the connections which law and phyſic have with each other. If the legiſlator would compile a code of laws; or the judge on the bench decide any queſtions relative to civil, common, or eccleſiaſtical law; they will meet with many inſtances, in which they will be obliged to call in the principles of our art to their aſſiſtance; and to apply to that extenſive branch of phyſic commonly called the medicina legalis, or medicine of the bar.

It would be neceſſary to take a ſurvey of almoſt all the parts of natural philoſophy, ſhould we attempt to enumerate the various relations which medicine bears to this ſcience. The firſt philoſophers, who employed themſelves in the contemplation of nature, applied themſelves alſo to the cure of diſeaſes; and Pythagoras, Empedocles, Democritus, &c. were equally ſkilled in the great ſciences of medicine and phyſics. Hippocrates firſt diſtinguiſhed theſe two ſciences, not with intent to ſeparate them entirely, but only to reduce, into a ſmaller compaſs, an immenſe field of knowledge, ſufficient to occupy a number of well qualified men, and too extenſive to be ſufficiently cultivated by one; in which, however,

Was ever Tartar fierce or cruel
Upon the ſtrength of water-gruel?
But who can ſtand his raging force,
When firſt he rides, then eats his horſe! K.

each co-operator is ſtill to remember, that the ſpot he works upon is a part of one and the ſame whole.

That branch of natural philoſophy employed in the ſtudy of the body, conſidered merely as a body, has been diſtinguiſhed by the name of phyſics, while others have received their titles from the different kinds of bodies, which were the ſubjects of their various enquiries. The human body is that of medicine; and how uſeleſs is medicine without a knowledge of phyſics? Whoſoever is unacquainted with the powers and properties of bodies, and the laws of motion, will never be able to learn the art of healing: profeſſors of phyſic never deal with ſtudents ſo ill qualified. Now if medicine reaps many advantages from phyſics, it muſt alſo be allowed that phyſics are no leſs uſeful to the former; natural philoſophy having been much improved by phyſicians. Gilbert, an Engliſh phyſician, was the firſt who laid open the phænomena of * electricity. The great Boyle, a doctor of Oxford, has enlarged the ſcience of phyſics more than any other man of letters; Boerhave, in his experiments on the elements, has ſet this branch of knowledge in a new light; and to mention no more, the celebrated Muſchenbroeck, whom all the writers in phyſics conſider as their leader,

* We think, under correction, this ſhould have been magnetiſm; Gray having firſt written on electricity.

had laid the foundation of his reputation in the practical treatiſes he publiſhed.

The connection between the ſtudy of medicine and that of languages, hiſtory and literature, is not quite ſo ſtriking; although it is by no means imaginary. What phyſician would not be aſhamed of being unacquainted with hiſtory, or the belles lettres? What phyſician would relinquiſh the ſatisfaction of reading the fathers of the ſciences in their own language? or, who does not regret his being unable to read that of the Arabian phyſicians, of whom we have no faithful (6) tranſlations extant?

Theſe ſciences alſo derive reciprocal aſſiſtances from that of medicine; which alone can clear up ſome obſcurities in hiſtory. Thoſe who wiſh to ſpeak pure and elegant Latin, are continually reading the works of Celſus, one of the moſt celebrated phyſicians among the antients. Pliny, although he

(6) My ignorance of the Arabic language, which perhaps is not our learned author's caſe, has made me a moſt incompetent judge of the certainty of this aſſertion, which I know, however, to be the general opinion of learned phyſicians. But having lately read the learned Mr. Channing's Latin tranſlation of Rhazes, with the Arabic in oppoſite pages, it was ſo clearly intelligible to me, that I hope his tranſlation may be excepted from the number of bad ones from the Arabic. The ſame gentleman has ſome time ſince printed propoſals, for publiſhing a tranſlation of all the works of Albucaſis, which Dr. Freind had recommended as a deſideratum, in his Hiſtory of Phyſic. K.

never practiſed phyſic, yet was well acquainted with it, and directed his ſtudies chiefly to the advancement of medical knowledge; and it has been juſtly affirmed of him, that his readers did not only find great aſſiſtance towards the knowledge of the Latin tongue in his writings, as in thoſe of other authors, but that even the whole of this language was contained in them. Aretæus, who is eſteemed a great proficient in the art of healing, was alſo well verſed in the Greek tongue. Galen has an eloquence peculiar to himſelf, as Alexander of Tralles has likewiſe; and the learned in the Arabic language ſay, that it is no where to be found ſo pure, as in the writings of the phyſicians.

It would ſeem at the firſt glance, from what I have advanced, that there were little difficulty in expatiating on ſuch a copious ſubject; but on a farther attention to it, I have been induced to think otherwiſe; and therefore leaving this elegant topic to men of ſuperior talents, I have choſen one from the practice of phyſic, which may pleaſe perhaps on its own account, and which only requires to be repreſented in a plain manner. The huſbandman talks of his oxen (*g*), the ſailor of winds; but being invited as a phyſician to ſpeak before a learned body, I flattered myſelf with the hopes of

(*g*) De tauris dicit arator, navita de ventis;
Quod medicorum eſt, promittunt medici.

engaging

engaging their attention, by an intereſting diſcourſe on the health of men of letters.

§. 2. It has long ſince been obſerved, that a cloſe application to ſtudy is prejudicial to health; and Celſus, after having informed men of learning of the dangers to which they are expoſed, by their immoderate attachment to it, has laid down ſome rules for guarding againſt them. Plutarch, that excellent judge of whatever is good and laudable, not only recommends it to all learned men to attend to the rules of phyſic, but even to ſtudy medicine themſelves; for he thought it unreaſonable that they ſhould conſume their lives in enquiries frequently of little conſequence, while they neglected the ſtudy of health itſelf. They certainly do not know, ſays he, that this valuable art was for a long time a part of philoſophy; and that it is eſſentially neceſſary to thoſe perſons who macerate themſelves with much daily thinking, and with many ſleepleſs nights.

§ 3. The diſeaſes to which the learned are particularly expoſed ariſe from two principal cauſes, the perpetual labours of the mind, and the conſtant inaction of the body; an inveſtigation into the fatal effects of which cauſes will exhibit an accurate deſcription of their diſeaſes.

§ 4. Metaphyſical ſpeculation enquires into the cauſes of the influence of the mind on the body, and that of the body on the mind:

mind: medicine is engaged in leſs abſtruſe, but perhaps in leſs uncertain reſearches; it does not attempt to diſplay the firſt cauſes of this reciprocal power in the two diſtinct parts of which man conſiſts, but confines itſelf to an attentive obſervation of the phœnomena that reſult from it. Experience inſtructs the phyſician, that ſuch a peculiar ſtate of the body muſt neceſſarily produce a certain correſpondent exertion of the ſoul; that ſuch emotions of the ſoul muſt unavoidably be attended with a reciprocal alteration in the body; and that, while the ſoul is abſorbed in thought, a part of the brain is kept in a ſtate of tenſion, which becomes fatiguing to it. Thus far only phyſicians extend their enquiries; and this indeed is all that is requiſite for them to know.

The connection of the ſoul with the body is in fact ſo ſtrong, that it is even difficult to conceive how one of them ſhould act, and the other not be ſenſible, in a greater or a leſs degree, of that action. The organs of ſenſe being put in motion, convey the ſubject of thought to the mind, by acting on the fibres of the brain; and while the ſoul is employed in thinking, the parts of the brain are in a greater or leſs forcible motion, and in a leſs or greater degree of tenſion. Theſe motions fatigue the medullary or nervous portion of the brain; and this delicate ſubſtance, after a long courſe

courſe of meditation, becomes as much exhauſted as a ſtrong man is after exerciſe. Whoever has thought intenſely, even once in his life, muſt have experienced this in himſelf; and there is certainly no very ſtudious man, who has not often felt, on coming out of his cloſet, violent pains in his head, attended with a great degree of heat in this part; this heat will depend on the proportion of wearineſs and inflammatory tenſion, which the medullary ſubſtance has undergone: the eyes ſoon become ſenſible of this fatigue; and if we conſider a man who is deeply engaged in thought, we ſhall ſee that the muſcles of his face are all upon the ſtretch, and ſometimes appear even convulſed. Plato has taken notice of the danger of fixing the attention too ſtrongly: "When the action of the ſoul is too powerful, ſays he, it attacks the body ſo violently, that it throws it into a conſuming ſtate: if the ſoul exerts itſelf in a peculiar manner, on certain occaſions, the body is made ſenſible of it, and becomes heated and debilitated." Ramazzini, a famous Italian phyſician, has obſerved the ſame. "The union of the ſoul with the body is ſo intimate, that they reciprocally ſhare the good or evil which happens to either of them; the mind cannot put forth its powers, when the body is tired with immoderate exerciſe; and too cloſe an application to ſtudy deſtroys the body,

" body, by diſſipating the animal ſpirits, " which are neceſſary to recruit it (*b*)."

That we may underſtand the influence the workings of the mind have upon the health of the body, we need only remember in the firſt place, the fact I have already mentioned; and which every perſon who thinks, and takes notice of his thinking, muſt be ſenſible of, viz. that the brain is in action during the time of thinking. 2dly, That every part of the body which is in action becomes weary; and that if the labour continues for any length of time, the functions of the part are diſturbed. 3dly, That all the nerves proceed from the brain, and exactly from that part of it ſuppoſed to be the ſeat of thinking, and called the ſenſorium commune. 4thly, That the nerves are ſome of the moſt principal parts of the human frame; that they aſſiſt in all its functions; and that whenever their powers are diſturbed, the whole animal œconomy muſt ſuffer. Theſe evident principles being once eſtabliſhed, every one muſt be ſenſible that when the brain is exhauſted by the action of the ſoul, the nerves muſt of courſe be injured; in conſequence of which, health will be endangered, and the conſtitution will at length be deſtroyed without any other apparent cauſe.

(*b*) Opera omnia, p. 648.

§ 5. Tri-

§ 5. Trifling books can bring on no other inconvenience than loſs of time, and wearineſs of ſight; but thoſe which by the ſtrength and concatenation of ideas ſeem to raiſe the ſoul as it were above itſelf, and compel it to meditate, wear out the mind, and exhauſt the body; and the more we have been delighted with this meditation, and the longer it has been kept up, ſo much the more fatal will the conſequences be. M. De Monteſquieu obſerves, "that every "thing becomes tireſome to us in proceſs "of time, and eſpecially thoſe things which "give us the greateſt pleaſure: the fibres "which have been exerciſed by them ſtand "in need of reſt; others therefore better "diſpoſed to ſerve us muſt take their turn "of duty, that labour, by this means, may "be divided amongſt them (*i*)." M. Mallebranche was ſeized with a violent palpitation as he was reading L'Homme de Deſcartes; and there is now at Paris a profeſſor of rhetoric, who finds himſelf indiſpoſed at the reading ſome fine paſſages in Homer *.

§ 6. The brain, which is the immediate ſeat of theſe emotions, the nerves which ariſe from it, and the ſtomach, which is furniſhed with many nerves of an exquiſite ſenſation, are the parts firſt attacked, and commonly moſt injured by the immoderate labour of the mind; but if it ſhould continue

(*i*) Petit Porte-feuille, p. 113.

* Lorry, De Melancholia & morbis Melancholi. tom. 1.

for

for any length of time, almoſt all the parts of the body become partakers of the injury.

§ 7. M. Van Swieten ſpeaks of a man of letters whoſe health had been impaired by literary watchings (*k*): whenever he liſtened with attention to any ſtory or trifling tale, he was ſeized with giddineſs; he was in violent agonies whenever he wanted to recollect any thing which had ſlipped his memory; he oftentimes even fainted away gradually, and experienced a diſagreeable ſenſation of laſſitude. There was ſtill a more troubleſome circumſtance attending this complaint; for whatever efforts he might make, it was never in his power to ſuſpend this involuntary recollection; but he was obliged to go on with it againſt his will, till at length it made him quite ill (*l*). M. Viridet, my fellow-citizen, was acquainted with a woman who was ſeized with a violent fit of the colic, every time ſhe applied herſelf to any thing (*m*); and a modern author ſpeaks of a man whoſe arm ſwelled conſiderably whenever he gave way to thought, or was ſuddenly affected by any circum-

(*k*) Theſe are what the antients called Lucubrationes.

(*l*) Commentar. in Boerhav. aphor. t. iii. p. 413.

(*m*) Traité du bon Chile, t. ii. p. 647. This work ſeems to be little known, although it appeared in 1735, not long before the death of the author; it contains a number of good obſervations, and is therefore worthy of more notice.

ſtance

ſtance *(n)*. I was once conſulted by an Engliſh gentleman, who, during his ſtay at Rome, applied ſo cloſely to the mathematics, that after a few months he could make no farther uſe of his eyes, although they ſhewed no outward appearance of injury. He made others read to him, but ſoon after his ſenſes were of no ſervice to him; ſo that he could not bear the moſt trifling converſation for the ſpace of a few minutes.

My friend M. Zimmerman gives an inſtance of a literary complaint of too intereſting a nature to be omitted. A young gentleman of Switzerland, ſays that learned phyſician, gave himſelf up entirely to metaphyſics; he ſoon perceived that his mind grew weary, which he endeavoured to conquer by cloſer application: this increaſed his diſorder; notwithſtanding which he ſtudied ſtill more earneſtly. This conteſt laſted for ſix months, and the diſeaſe increaſed to ſuch a degree, that the body and the ſenſes became injured. The health of his body was reſtored by medicines, but the mind and ſenſes degenerated in a manner almoſt imperceptible into a compleat ſtupor. Although he was not blind, he appeared not to ſee; although he was not deaf, he ſeemed not to hear; and although he was not dumb, he never ſpoke a ſyllable. He ſlept however, eat and drank, without

(n) M. Bordeux Prix de l'Acad. de Chir. t. vi. p. 199.

taſte,

taſte, or without averſion; never aſking for food, nor refuſing it when offered. He was deemed incurable, and therefore no medicines were given to him; and he continued in this ſtate during the ſpace of a year. At the expiration of this term, a letter was read out loud in his preſence; he ſtarted, complained inwardly, and put his hand up to his ear. This being obſerved, the perſon who was reading raiſed his voice; he then began to cry out, and diſcovered ſymptoms of exquiſite pain: the experiment was repeated, and he recovered his hearing by exceſs of pain. The other ſenſes were reſtored one after another in the ſame kind of way; and at the return of each ſenſe, it was obſerved that he recovered gradually from his ſtupidity; but his pains were ſo acute, and his ſtrength ſo far exhauſted, that he was for a long time in great danger of dying. At length nature prevailed almoſt without any aſſiſtance (7) of art; his

(7) This recovery, with ſcarcely any medical aſſiſtance, is an indiſputable averment; and here an importantly medical query ariſes, viz. Whether this recovery, which we are informed, and find by the iſſue, was a compleat and perfect one, would have been the conſequence of much medical, or rather pharmaceutical aſſiſtance, which may certainly ſometimes more juſtly be termed *interruption?* The ingenious phyſician, from whom Dr. Tiſſot cites this extraordinary caſe, has manifeſted great judgment in ſubmitting the cure (after the cauſe was evident, and the further continuance of it removed) almoſt entirely, if not

his health was entirely reſtored; and he is at preſent one of our moſt learned philoſophers (*o*). It is impoſſible to explain theſe phænomena otherwiſe, than by admitting the nerves to be affected, and by the influence the ſoul has upon them.

§ 8. Daily experience convinces us of the power of the ſoul upon the ſtomach. Thoſe moſt addicted to reflection, perform their digeſtion, cæteris paribus, with greater difficulty; on the contrary, thoſe who think little, generally digeſt well. We frequently ſee perſons of weak underſtandings eat and drink very freely, without ſuffering any inconvenience, although they lead ſedentary lives, and have not remarkably ſtrong conſtitutions. On the contrary, how many ſenſible men do we ſee, whoſe digeſtion is performed with much pain and

not ſolely (though doubtleſs under a proper regimen) to the conduct of nature, whoſe own criſes, where her powers are not too much depreſſed for a liberal exertion of them, are very generally more compleat and effective, than our imitative ſubſtitutions for them by art. Caſes, however, will certainly ſometimes occur, which may reduce the beſt phyſician to have recourſe to ſuch; and the moſt attentive and ſagacious will be the likelieſt to direct, and to time, the moſt eligible evacuation, as well as to regulate the degree of it. K.

(*o*) This obſervation is extracted from a chapter M. Zimmerman has inſerted in his Treatiſe on Experience in Medicine, upon the Effects of the Attention of the Mind; he took the trouble to tranſlate it for me after the firſt edition of this little work: the chapter is full of uſeful obſervations, which I ſhall hereafter have occaſion to make uſe of.

difficulty,

difficulty, although they are of a good habit of body, and uſe ſome exerciſe. We know that one of the firſt ſymptoms of an injured brain, after a blow on the head, is a vomiting; and an affection of the ſame kind ſeems to take place in all irritations of that organ: the effect is always proportioned to the cauſe: and if it is an uncommon thing that the labour of the mind ſhould be carried to ſuch a height, as to produce inſtantaneouſly the ſame effects upon the nerves, as are occaſioned by a violent blow, yet there are ſtill ſome inſtances of this kind. A man of extraordinary genius, who has been extremely ſtudious, told me not long ago, that after having applied very cloſely for ſeveral hours together, as he found his imagination highly worked up, he perceived that his head became ſuddenly weak, his ideas were all confuſed, he loſt his comprehenſion, became ſick, and vomited ſeveral times. Mr. Pome ſpeaks of a learned man who had ſo far weakened his ſtomach by ſtudy, that he vomited after every meal (*p*). This unhappy conſequence of intenſe application has been more conſtantly obſerved than any other. Ariſtotle was obliged to wear upon the region of the ſtomach a bladder filled with aromatic oil; and M. A. Antoninus had ſo far injured this viſcus, by the continual ſtate of extenſion in which his mind was kept, by the government of the

(*p*) Traité des Vapeurs Hyſteriques, p. 248.

empire

empire of the world, and the cultivation of literature, that, according to the report of his firſt phyſician, Galen, he was ſubject to indigeſtions he could not get rid of, without faſting for four and twenty hours, and taking a glaſs of warm wine, in which a few grains of pepper were infuſed. The ſame author has handed down to us the ſtory of a woman, named Arria, whom he was very fond of, and who, by an aſſiduous application to Plato's philoſophy, had ſo weakened her ſtomach, that ſhe could not take any nouriſhment, and was ſo debilitated, that ſhe could not ſupport herſelf any other way than by laying on her back (*q*). M. Boerhaave, who lived long in a city where learning is much cultivated, ſays, that ſtudy begins by impairing the ſtomach; and that if the complaint is not relieved, it may degenerate into a melancholy. A famous Portugueſe phyſician uſed to ſay, that a vitiated ſtomach attends learned people, as ſurely as the ſhadow follows the body (*r*.) I have myſelf ſeen patients who have ſuffered for this immoderate thirſt of learning, firſt by a loſs of appetite, an entire inability of the digeſting powers, and a total debility which enſued; afterwards they have been tormented with ſpaſms, convulſions, and at length with a total privation of all their ſenſes.

(*q*) De Theriacâ, ad Piſonem. cap. 2. Chart. t. 13. p. 932.

(*r*) Amati Luſitani curat. Medicæ. p. 153.

§ 9. The

§ 9. The injury the mind has done the body ſoon recoils upon itſelf; for it has been the will of the Supreme Being, that as long as theſe two ſubſtances continued together, the labours of the mind ſhould in a certain degree depend upon the health of the body: this truth has been ever acknowledged. Pliny the younger has emphatically declared, that "the props of the body ſupported the ſoul (*s*)." And long before him Democritus had ſaid, "Health increaſes the powers of the mind; when "the body is diſeaſed, the mind is not capable of reflection (*t*)." It is not therefore ſurpriſing that the mind ſhould be weakened, after it has exhauſted the brain and debilitated the nerves. Plato indeed choſe an unwholeſome place for his lecture-room, thinking that if he was in leſs vigorous health, his mind would be better diſpoſed to reflection; but his conduct on this occaſion is not to be admitted as an objection to what has been advanced, being directly contrary to his general doctrine, and only relative to his own peculiar habit, which was rather bulky and inclined to fat; ſo that he was deſirous of having a fever, in order to become more lean. Neither ſhould it be objected that ſome men of great learning are very ſickly; for if we examine attentively the ſtate of their health, we ſhall

(*s*) Epiſt. lib. 2. epiſt. 9.
(*t*) Epiſt. ad Hippocrat. Foes. t. 2. p. 1288.

be

be convinced that the diſorders they have been ſubject to, have not ariſen from any affection of the brain or nerves, whoſe original powers are ſometimes ſo ſtrong, that they are but ſlightly diſturbed by the vitiated ſtate of the other organs, and remain capable of ſupporting the functions of the ſoul.

§ 10. The firſt ſymptoms which indicate a weakneſs of the nervous ſyſtem, are a kind of puſillanimity we were before ſtrangers to; diffidence, fear, dejection and diſpiritedneſs: he who was the moſt intrepid man now becomes the moſt timorous; the ſlighteſt undertaking frightens him, the moſt trifling unforeſeen incident makes him tremble; the ſlighteſt indiſpoſition appears to him a fatal diſeaſe; and the idea of death fills him with intolerable horrors. Some tyrants have condemned certain philoſophers to death, but have never been able to make them fear it; how much more effectually would their cruelty have been exerciſed, if by ſuffering them ſtill to live, they could have inſpired them with thoſe fears of death hypochondriacs are tormented with? We ſee inſtances every day of men of learning, who perceiving the firſt ſigns of this diſtemper, have been obliged to forſake their favourite ſtudies; whoſe nerves being weakened, they become incapable of attention; their memory fails; their ideas are confuſed; a ſenſation of heat in the head, pal-

pitations, a total dejection, and the apprehenſion of death makes the pen fall from their hands. Quiet, nouriſhing food, and exerciſe, ſoon reſtore them to their former health; but as ſoon as they return to their books, they are again obliged to quit them. The day paſſes in theſe alternatives; at night they are fatigued and caſt down; they go to bed, but their nights are much diſturbed; the irritability of their nerves prevents them from ſleeping, and oftentimes even from the power of thinking. I know a young man, who after having ſtudied very hard, could never open a book without being ſeized with convulſions of the muſcles of the face and head, which then ſeemed as if it were bound tight with cords. It would be needleſs to produce a greater number of examples, to ſhew the danger of intenſe application, and its fatal influences upon the nervous ſyſtem, ſince they would only ſerve to ſwell the volume, without affording any additional proof of the truth of the aſſertion, which has been already ſufficiently eſtabliſhed. "Study "(ſays M. Rouſſeau) makes men tender, "weakens their conſtitution, and when "once the body has loſt its powers, thoſe "of the ſoul are not eaſily preſerved. Ap"plication wears out the machine, ex"hauſts the ſpirits, deſtroys the ſtrength, "enervates the mind, makes us puſillani"mous,

" mous, unable either to bear fatigue, or " to keep our paſſions under (*u*)."

§ 11. The labours of the mind do not only weaken and irritate the nervous ſyſtem, but alſo produce diſorders of the nerves, which are ſtrongly characterized, and cannot be miſtaken. Galen knew a grammarian who was ſeized with an epileptic fit whenever he was intent upon teaching or thinking of any thing (*x*). I have myſelf ſeen, and M. Van Swieten obſerves the ſame, very promiſing children, who have been forced to ſtudy ſo conſtantly by ſevere maſters, that they have become (8) epilep-

tic

(*u*) Preface de Narciſſe, œuvres diverſes, t. 1. p. 172.

(*x*) De Loci Affect. l. 5. c. 6. Chart. t. 7. p. 492.

(8) This effect has not occurred to my own obſervation in the ſame degree; but I have known an apparent diminution of the apprehenſion and memory, from too early and too aſſiduous an exerciſe of the latter in very young children. Hence to the many relations which our learned author has obſerved between the ſcience of medicine and other ſciences, we may add, that even thoſe gentlemen, who are intruſted with the liberal inſtitution of youth, would become the more conſummate inſtructors, from a phyſical diſcernment of the different genius and tendency, as well as the various conſtitutions of their ſeveral pupils; ſince ſuch a diſcernment muſt ſuggeſt to them, that the former, at leaſt in early youth, ſhould not be violently over-forced to the impairing of the latter, which, in its conſequences, might ſtill further depreſs the faculties. Diſcipline for natural dulneſs, for a ſhort memory, or great difficulty of retention, is an abſurd ſeverity, as it has a tendency rather to increaſe thoſe de-

tic during the reſt of their lives. M. Hoffman ſpeaks of a young man who was ſeized with a momentary fit, whenever his (9) mind or his memory were overloaded; as ſoon as he quitted his ſtudies, the palpita-

fects by terror, than to remove them. I remember to have ſeen an idiot, who, his friends aſſured me, was rendered ſuch by an extreme fright after he had attained the uſe of ſpeech: and other inſtances of the ſame kind are recorded. A proper conſideration of the claſs of readers to whom this treatiſe is addreſſed, will prove the preſent note ſufficiently relative to the ſubject. K.

(9) This rationally ſuggeſts, that the perſon affected thus might not be conſtituted by nature for a man of letters, tho' well fitted perhaps for ſome other purſuit. We may be certain, the proportion of people intended for ſtudy and contemplation, and of thoſe intended for various employments, even down to ſervitude, is very wiſely ordered by Providence, though we ſeldom form the calculation. As the condition of our exiſtence in this life requires more labour than ſpeculation or amuſement, it is doubtleſs very right that the unlearned ſhould conſtitute the majority in every ſtate. The caſe cited here from Hoffman refers conſiderably to that of my immediately preceding note; and muſt diſpoſe a ſenſible perſon not to diſtract ſuch individuals with ſtudy and ſcience, as nature meant for different occupations; while ſhe manifeſts ſuch ſtrong indications of their averſion to, their inability for, the former. To have become epileptic, as in theſe three inſtances, even from a conſiderable exerciſe of the attention or memory, (for no very great exceſs is mentioned) is nearly a proof, that the wrong organ was ſet to work. Talents for ſcience or literature are generally combined with a fond propenſity to exerciſe them, which greatly leſſens the fatigue their poſſeſſors would otherwiſe experience from aſſiduous ſtudy. K.

tions

tions ceaſed, and he recovered his health (*y*). The famous Petrarch was afflicted in the ſame manner.

§ 12. An infinite number of other diſeaſes are brought on by ſtudy; beſides thoſe which immediately attack the nerves by diſturbing the ſyſtem. A celebrated mathematician troubled with an hereditary gout, and who was always a very regular man, haſtened the fit, by applying too cloſely to the ſolution of a difficult problem (*z*). The uncommon accident which happened to M. le Chevalier D'Epernay is well known: after an aſſiduous application for the ſpace of four months, without any previous ſymptom of diſeaſe, his beard, his eye-laſhes, his eye-brows, and in ſhort all the hair of his head and body fell off (*a*). This phænomenon was certainly brought about by the little bulbs, which are the roots of the hair, being deprived of nouriſhment; and this might ariſe from three cauſes: 1ſt, from the powers of the ſtomach, the firſt organ of digeſtion and nouriſhment, being diſordered: 2dly, from the action of the nerves, which have ſo great a ſhare in nutrition, being diminiſhed, and which being employed by the ſoul, were inadequate to the functions of the body: 3dly, from that kind of

(*y*) Medicin. Ration. de Epileps. § 19.
(*z*) Van Swieten, t. 4. p. 305.
(*a*) French Gazette, Feb. 23, 1763.

ſlow fever men of letters are ſubject to, and which deſtroying the nutritious lymph, makes them become pale and thin, and often throws them into a ſtate of conſumption and decay. This fever is often produced by the irritation the heart receives from the too earneſt application of the mind, in conſequence of which its pulſations become more frequent.

§ 13. In order to conceive the effects of deep thinking, it may be conſidered as a ligature applied to all the nerves, which putting a ſtop to their action, brings on the ſame conſequences upon the whole machine, as a ligature applied more or leſs tight to the branch of a nerve, would induce on the parts to which that branch was diſtributed. Reflection exhauſts us alſo in the ſame manner as immoderate evacuations do, which waſte the body, deſtroy its powers, attenuate the humours, and produce a too great irritability of the nervous ſyſtem. Large bleedings, frequent purgings, ſalivations too copious, too great a flow of urine, in ſhort every immoderate evacuation, by weakening the tone of the veſſels, and ſubſtracting too much from the quantity of fluids, prevents the nervous fluid or the animal ſpirits, on which the action of the nerves depends, from being properly prepared in the brain. Meditation alſo, by keeping the nerves too long in a ſtate of action, waſtes the ſpirits too much, and hinders

ders the brain from preparing them; ſo that in both inſtances, this important fluid, the pureſt ſubſtance, and moſt highly prepared of any other in the human body, and which is moſt neceſſary for the performance of its functions, is either deficient, or undergoes ſome alteration, which muſt inevitably produce many diſorders. There is, however, an eſſential difference between a debility of the nerves, cauſed by exceſſive evacuations, or the fatigues of the body, which are attended with the ſame conſequences, and that proceeding from the attention of the mind; which is, that the firſt of theſe cauſes does indeed for a time ſuſpend the ſecretion of this liquor, but does not diſturb the ſecretory organs; whereas the ſecond, to wit, the labours of the mind, affect the organ itſelf, as I ſhall explain more fully hereafter. The firſt takes from the manufacture ſome materials it ſhould work upon, the other attacks the manufacture itſelf; and theſe diſorders of the brain, the effects of immoderate application, are now to be the ſubject of our enquiries. They depend on three laws of the animal œconomy, which ſhall be ranged under ſo many heads.

§ 14. The firſt of theſe is that when the ſoul, from being employed a long time, has made too great an impreſſion on the brain, it becomes unable to reſtrain it; the action continues involuntarily, and re-acting

upon the ſoul, fills it with ideas truly delirious, becauſe they are no longer anſwerable to the impreſſions of external objects, but only to the internal diſpoſition of the brain, every part of which is unfitted to receive any new images conveyed by the ſenſes. Spinello, a famous Tuſcan painter, having painted the fall of the angels, gave ſuch terrible features to Lucifer, that he was ſeized with terror in beholding them; and during the reſt of his life thought himſelf haunted by that devil, who was continually reproaching him for having repreſented him in ſo horrible a ſhape. M. Paſcal, a man of an uncommonly ſtrong mind, did ſo much injury to his brain by intenſe application and deep thought, that he always imagined there was a gulph of fire near him; the conſtant agitation of ſome of his fibres conveyed this ſenſation to him perpetually; and his reaſon, ſubdued by his nerves, could never get the better of this idea. How many others are there who have been led beyond the limits of truth by an over-heated imagination? Gaſpar Barloeus, an orator, poet, and phyſician, was ſenſible of theſe dangers, and often uſed to warn his friend Hughens of them (*b*); but

(*b*) He wrote the following advice to him: "Nec "literas, nec verſus reſcribe, ne in novum diſcrimen "valetudinem dubiam adducas. Facile enim ex attentione incaleſcent ſpiritus, hinc ſanguis, hinc habitus corporis." Barloei Epiſt. lib. 1. ep. 4.

he

he was notwithſtanding regardleſs of himſelf, and weakened his brain ſo much by exceſſive ſtudy, that he thought his body was made of butter: in this perſuaſion, he carefully avoided coming near the fire; till at laſt, wearied with continual apprehenſions, he threw himſelf into a well. For theſe twenty years paſt I have regretted the loſs of a friend, equally eminent in genius as well as character; a man calculated for great undertakings, whoſe ſtudies were divided between literature and phyſic, which he certainly would have improved; he was employed day and night in reading, reflecting, and making experiments; he firſt loſt his ſleep, then was ſeized with ſome tranſitory fits of lunacy, and at length became quite mad, ſo that even his life was preſerved with difficulty. I have ſeen other men of learning who have begun by being maniacs, and have at length become compleat idiots.

I know a man, ſtill more eminent by his virtues than by his high birth, who having applied himſelf for twelve ſucceſſive hours to draw up a memorial of the utmoſt conſequence, fell into a delirium after he had finiſhed it, which laſted 'till his ſenſes were compoſed with ſleep.

There are many obſervations of the ſame kind extant; and I have been told by a man of veracity, that Peter Jurieu, ſo famous for his theological diſputations, his contro-

verſial writings, and his commentary on the Apocalypſe, had ſo far injured his brain, that although his judgment was ſtill preſerved in many inſtances, yet he uſed to affirm that his frequent colics were cauſed by the fighting of ſeven knights ſhut up in his bowels. Others have imagined themſelves to be lanthorns; and ſome have been known to afflict themſelves upon the ſuppoſition of their having loſt their thighs.

The diſorders produced by the efforts of the mind fall ſooneſt upon ſuch as are inceſſantly engaged in the contemplation of one object; in this caſe there is only one part of the ſenſorium acted upon, and that is always on the ſtretch: it is not relieved by the action of the other parts, and therefore is ſooner fatigued and injured. If one, or only a ſmall number of muſcles, is continually kept in motion, the body ſuffers more than if the ſame quantity of action was ſucceſſively divided among all the muſcles: it is the ſame with the brain; when its different parts act alternately, it is not ſo ſoon weary; the part at reſt recovers itſelf, while the others are exerciſed: this change from labour to reſt, is the ſureſt method of preſerving the organ. I have ſeen a woman who appeared very ſenſible till ſhe was five and twenty; at which time of life ſhe unfortunately attached herſelf to the Moravians, and was ſo poſſeſſed with the love of Jeſus Chriſt, whom ſhe called her

lamb,

lamb, that ſhe could not admit any other idea; and without any other cauſe became an idiot in the ſpace of a few months; in which ſtate ſhe had no other recollection but that of her friend. I ſaw her almoſt every day during ſix months, and could get no other anſwer to my queſtions than theſe words, "my ſweet lamb;" theſe ſhe repeated every half hour, with her eyes caſt down. She lived ſix months in this condition, and then died of a (10) maraſmus.

But

(10) Too many inſtances of ſuch dreadful infatuation, and even of more immediate ſuicide, from a ſuppoſed religious cauſe, might be referred to among the congregations of ſome modern ſectaries here: and theſe events are the more melancholy, by augmenting the number of ſuicides in a nation, ſuppoſed to be generally more addicted to this crime, than any other people in Europe. Such conſequences, however, from this particular cauſe, muſt convince all perſons of a ſound underſtanding, of the errors of thoſe tenets and declaimers which cauſe, or very greatly conduce to it; ſince genuine eſſential Chriſtianity muſt very powerfully deter men from this unnatural violence. Whatever Dr. Sherlock's charity has diſpoſed him to ſuggeſt, in extenuation of ſuch voluntary fatalities from deſpair, and in his not wholly deſpairing notions of their eternal ſtate; it is inconteſtable, that this temerity is a horrid violation of the ſtrongeſt inſtinct, which the Author of univerſal nature has implanted into ours. Indeed where this effect ariſes from indiſputable inſanity, through whatever cauſe, or previous diſeaſe, the guilt will vaniſh, as the miſerable patients in that ſituation muſt be merely paſſive. It has been aſſerted, but I hope without any juſt foundation, that ſome of theſe preachers have exulted in theſe diſmal events, as proofs of their own powers of convincing and converting.

But without going any farther for inſtances, we have lately ſeen a ſtudent at this academy, a young man, who having taken it into his head that he could diſcover the quadrature of the circle, died mad at the Hotel Dieu of Paris.

§ 15. The ſecond law the human body is ſubject to, and on which many diſorders of the brain proceeding from ſtudy depend, is, that the humours are more abundantly derived to any part which is in action. Mr. Morgagni knew a learned man at Bologna, whoſe noſe bled whenever he happened to indulge in meditation before he roſe in the morning (*c*). When the brain acts, it receives an additional quantity of blood, which increaſing the tone and motion of the veſſels, produces that ſenſation of pain and heat before mentioned, beſides other fatal diſtempers, according to the

verting. I am perſonally certain, they have encouraged their audience to ſob, cry, and roar out. But it really amazes me, as I cannot ſuppoſe them to be acted by any malignant intention, that a few cataſtrophes of their hearers or penitents being ſent to Bedlam or to the grave, have not effectually convinced themſelves, theſe cannot be the fruits of true religion; and thence, of the conſequent abſurdity and evil of their conduct. To ſuch indeed we may certainly well apply the following obſervation of the late good and ingenious Dr. Young:

"And when their ſins they ſet ſincerely down,
"They'll find that their religion has been one." K.

(*c*) De ſedibus & cauſis morborum, cap. 3. § 13.

various

various diſpoſitions of the brain, the blood, and the concurrence of other foreign circumſtances. Theſe diſtempers are, tumours, aneuriſms, inflammations, ſchirroſities, ulcers, dropſies, head-achs, deliriums, drowſineſs, convulſions, lethargy, apoplexies, and the want of ſleep, ſo frequently troubleſome to men of letters, which if it laſts, is generally productive of various diſorders both of the body and the mind. M. Boerhaave experienced this complaint for ſix weeks together, after a long ſeries of intenſe thinking; and during that time was in ſuch a ſtate of total indifference, that nothing could intereſt him (*d*.) Every perſon muſt have experienced that uneaſy kind of ſleep which comes on after fatigue, and is attended with a troubleſome feel of tightneſs and weight in the head. A ſlight irritation of the brain is ſufficient to cauſe an inſomnium; a ſtronger irritation produces convulſions and comatoſe diſorders; the moſt violent degree of it brings on an apoplexy; a kind of death too common amongſt men of learning. They are puniſhed in the part which has offended: the double injury produced by application, of weakening the brain, and determining a greater quantity of fluid to it, brings on at length the moſt alarming diſeaſes, which generally manifeſt themſelves when other

(*d*) Prælection. ad Inſtitut. t. 7. p. 145.

cir-

circumſtances concur in tranſmitting a great deal of blood to the head. Famous preachers and illuſtrious profeſſors have often been known to expire even in their deſks, which circumſtance happened at Leipſic to the celebrated Curtius. Livy has handed down to us the ſtory of king Attalus, who, as he was adviſing the Bœotians to make an alliance with Rome, died in the midſt of his diſcourſe; and at Baſil, in an academic ceremony held there, one of the candidates, who had previouſly fatigued himſelf by a long courſe of ſtudy, exerted himſelf ſtill ſo violently during the ceremony in repeating his diſcourſe, that he was ſeized with an apoplexy, and died inſtantaneouſly (*e*). I myſelf ſaw a worthy clergyman, who after having preached on a Whitſunday a long time, and with great energy, was ſeized with a tremor while he was giving the ſacrament, ſtammered, grew delirious, and then apoplectic; after which he grew childiſh, and lived for ſix (11) months in that ſtate.

(*e*) Felic. Plater. Obſ. p. 28.

(11) I think we are rather to infer from this expreſſion, that the patient died, after the duration of this infantile ſtate for ſix months, than that he recovered, after ſuch a duration of it. In the former, the preferable ſenſe, *vixit* will have ſome reſemblance to the Latin conſtructions of *vixit, dixit*, when it ſignifies the perſon made an end of living, ſpeaking, &c. Hence the indetermination in the text is not very conſiderable, and might have been eaſily avoided by our author. K.

M. Mor-

M. Morgagni ſpeaks of a monk who died apoplectic in the midſt of his ſermon. Inſtances of this nature are frequent; but the force of declamation is not always neceſſary to bring on apoplexies in ſtudious men; they happen ſometimes, when produced by no other cauſe than the diſpoſition the parts have been wrought into by the kind of life theſe men lead.

M. Zimmerman ſupplies me here again with another very intereſting obſervation. A Swiſs clergyman having raiſed himſelf a great reputation by his diſcourſes, was deſirous of keeping it up; he therefore read much, compoſed with a great deal of care, and exerciſed his memory much to learn his ſermons. By this continual attention of the mind he loſt his activity by degrees, his ſtrength waſted away, and the more he endeavoured to refreſh his memory, the more it failed him. At length he could not poſſibly retain his new ideas, although he ſtill preſerved the remembrance of the old ones; and at laſt he was ſeized with an apoplexy, which made him paralytic on one ſide: he was carried to the baths of Baden in Switzerland, where he died, aged forty-two years.

A profeſſor of Berne, well ſkilled in the oriental languages, a man ſtill in the prime of life, and a very hard ſtudent, became ſimple and childiſh: the cauſe of this accident

cident was water collected in different parts of the brain (*f*).

In the Conſultations of Wepfer we find the hiſtory of a young man of family, twenty-two years of age, who having applied himſelf inceſſantly to his ſtudies both day and night, fell into a delirium, which ſoon degenerated into a phrenzy, in which fit he wounded ſeveral perſons, and killed his keeper (*g*). Even the catalepſy, that uncommon diſeaſe, ſometimes is brought on by too ſevere application; and Fernelius gives a very remarkable inſtance of it. "A "man (ſays he) who paſſed whole nights "in writing and ſtudying, was ſuddenly at- "tacked with this diſtemper; all his limbs "ſtiffened in the attitude he was in when "the diſeaſe firſt ſeized him; he remained "upon his ſeat, holding his pen, and fix- "ing his eyes on his paper, ſo that he was "thought to be ſtill at his ſtudies, till be- "ing called to, and then ſhaken, he was "found to be without motion or ſenſa- "tion (*h*)." Walking in one's ſleep is another effect of the ſame cauſe. A ſtudent in phyſic at Leipſic, after having ſtudied with prodigious earneſtneſs for two months, entirely diſordered his reſt, ſo that as ſoon as

(*f*) Haller Element. Phyſiol. t. 4. p. 317. A very circumſtantial and intereſting hiſtory of this diſeaſe is to be found in the ſame work of M. Zimmerman; but it is too long to be inſerted here.

(*g*) Obſervat. de Affect. Capit. Obſ. 85. p. 327.

(*h*) Pathol. lib. 5, cap. 2. Oper. Omn. p. 406.

he

he fell aſleep, either in the night or day, he roſe and ſat himſelf down to ſtudy juſt as if he had been awake: he would look over his papers, take Caſtelli's lexicon, ſearch for ſome words in it, ſeemed diſpleaſed when he thought he could not find them, ſmiled when he imagined he did; then wrote in very legible characters, after which he went to bed again, and his ſleep continued (*i*).

Among the diſorders which this great flow of humours cauſes in the brain, let us not forget that it contributes much to form that unhappy diſpoſition which produces the hypochondriac affection; the fibres of the brain become weaker by being dilated, and are ſoftened ſo as to be unable to ſupport the different impreſſions; by theſe characteriſtics the nervous hypochondriac diſeaſe is pointed out.

§ 16. The third law of nature productive of other diſorders ariſing from the labours of the learned, is, the induration of the animal fibre by exerciſe.

The whole body becomes hard in proceſs of time, and old age itſelf is a general induration. In labouring men, thoſe parts moſt uſed in their reſpective employments grow callous; in men of letters, the brain itſelf is attacked in this manner, they become incapable of connecting ideas, and

(*i*) Bohn ap. Hallerthes. medic. pract. t. 7. p. 439.

grow

have lived longer, if they had given themſelves up to ſome other kind of buſineſs? It muſt be allowed indeed, that moſt of the greateſt men human nature has produced, have lived to a very great age; ſuch as Homer, Democritus, Parmenides, Hippocrates, Plato, Plutarch, the lord chancellor (13) Bacon, Aldrovandus, Galileo, Harvey, Wallis, Boyle, Locke, Leibnitz, Newton, Boerhaave; but can we infer from hence, that the labours of the mind carried to exceſs are not prejudicial? Such a concluſion is evidently falſe; although we may conjecture, that there are men formed as it were on purpoſe for theſe ſublime indulgencies, and that the happy diſpoſition of the fibres conſtituting great men, is perhaps the ſame which leads us on to old age. "Mens ſana in corpore ſano."

Beſides, the immortal name theſe great men have acquired, ſeems rather owing to the force of their genius, than the aſſiduity of their labours. The leiſure hours and avocations which muſt neceſſarily have attended men of ſuch conſequence, as well as the duties their ſituation obliged them to fulfil, were ſo many diverſions, which repaired the injury they might have received from ſtudy.

(13) Chancellor Bacon, the great and learned philoſopher, is ſaid to have died in his ſixty-ſixth year. Roger Bacon, who was a prodigy of knowledge for his day, lived to full eighty at leaſt. K.

Theſe

Theſe obſervations muſt certainly recall to your minds that reſpectable man, who lived during the ſpace of fifty years the honour and the delight of this academy and this city *(m)*. His whole life had been employed in cultivating the ſeveral branches of literature; he had made himſelf a perfect maſter of thoſe relating to his own profeſſion, which was a very extenſive department; and was alſo ſkilled in every one of the other ſciences. A knowledge ſo comprehenſive implied his having taken great pains, nevertheleſs his health was not in the leaſt impaired; yet he lived to the age of fourſcore and ſix years, without loſing the power of his genius or the quickneſs of his underſtanding. Can this example be produced as an objection to what has been ſaid? Certainly not; on the contrary, a more particular account of his method of paſſing his time, will induce you, gentlemen, to think he was a fit model to be propoſed to the imitation of all the learned. His great learning never made him forget that he was a man: he acquired the knowledge of a great variety of the moſt abſtruſe ſciences without neglecting the ſocial duties, and fulfilled the offices of citizen, father, profeſſor, friend, and member of ſociety, as a man of the world whoſe time was not otherwiſe taken up. When his

(*m*) M. Polier Prof. in Catacheſis, and oriental languages.

mind

mind was wearied with application, he recruited it by moderate exerciſe in his garden; his behaviour in all circumſtances was chearful and pleaſant, a qualification not to be kept up but by mixing ſocially and benevolently with mankind. If we compare this with Mr. Fontenelle's manner of living, whoſe name ſtands one of the foremoſt among the liſt of ſuch men of genius as have arrived to a very old age, we ſhall be convinced, that he could not have lived ſo long without any infirmity, if he had not blended the comforts of ſocial life with his literary occupations. Theſe lives were in nothing ſimilar to thoſe of the Eruditi, a race of men ſcarce known among the antients, who firſt ſhewed themſelves at the time that literature was in its decline, and appeared again at its reſtoration. Theſe men, fixed to their work as the needle to the pole, might be compared to ſome of the Indian Fakeirs; for like them they ſeclude themſelves from mankind; and mortify themſelves oftentimes, without adducing the ſlighteſt advantage to ſociety from their voluntary ſufferings. The difference is only in the means they torment themſelves with: the Fakeirs expoſe themſelves to the ſcorching heat of the ſun, and the moſt extreme ſeverities of cold; they tear themſelves with nails, chains, and whips; while the others deſtroy themſelves with books, manuſcripts, medals, antique

inſcriptions, and inexplicable characters; and eſpecially in giving way to that total inaction of the body, which is the ſecondary, and unfortunately the too frequent cauſe of the diſeaſes incident to men of letters, the dangers of which will be made evident from conſidering the ſtructure of the human body.

§ 19. The human body is compoſed of veſſels which contain fluids conſtantly circulating. When the veſſels have neither too much nor too little power; when the fluids are of a proper conſiſtence, and their motions neither too rapid nor too ſlow; then the body is in perfect health. But it is neceſſary to take notice, that the motion of the blood is what concerns us moſt at preſent. Whenever that alters, the other fluids and the ſolids are alſo changed: if it is too violent, the ſolids grow hard, and the fluids become thick; if too weak, the fibres are relaxed, and the blood is attenuated. The whole body is formed and preſerved by the chyle, which is lighter than any other ſolid or fluid part; motion aſſimilates, unites, and inſpiſſates its globules; and if by any means that motion ſhould be retarded, the different parts of the body cannot acquire a degree of ſolidity and firmneſs ſufficient for their ſeveral functions.

The heart is the firſt principle of motion; it gives the impulſe to the whole maſs of fluids, but is not of itſelf ſufficient to keep

it

it up; it has therefore been ſupplied by the Author of nature with a number of helps: whenever theſe fail, the circulation is ſlackened, and many diſorders enſue. One of the moſt effectual powers deſigned to aſſiſt in propelling the blood and increaſing the action of the veſſels, is muſcular action. The common practice of giving a patient after bleeding ſomething to be moved about in his hand, in order to accelerate the motion of the blood, is a ſufficient proof of this; and one ſtill more evident may be deduced from obſerving the effect of motion on the pulſe. The chief advantages of exerciſe are, that it ſtrengthens the fibres, preſerves the fluids in their proper ſtate, procures an appetite, facilitates the ſecretions, and eſpecially perſpiration, raiſes our ſpirits, and produces an agreeable ſenſation in the whole nervous ſyſtem.

§ 20. On the contrary, the effects of a too ſedentary life are ſuch as deſtroy the ſtrength of the muſcles, and render them, for want of uſe, unable to bear action: the circulation, therefore, deprived of this conſiderable aſſiſtance, and carried on by the powers of the heart and veſſels only, ſoon grows languid in the ſmaller veſſels, and at length in the whole courſe of the body. Vital heat diminiſhes; the humours ſtagnate, and become vitiated; ſome are attenuated, others thickened all undergo ſome alteration; and the ſecretions and natural

evacuations not being well performed, the body remains loaded with excrementitious humours, the regular expulſion of which is the ſureſt preſervative of good health: the acrimony of theſe humours gradually preys upon the conſtitution, ſtrength is diſſipated, and the blood becomes watery; hence ariſes the dropſy, ſo common to men of letters, which ſometimes attacks the brain, as we have before obſerved, and of which I have lately met with a freſh inſtance in a worthy magiſtrate, who had ruined a ſtrong conſtitution, not by ſtudy, but by labours of the mind of a more diſagreeable nature, and by a ſedentary life.

This effuſion of water in the brain has been noticed by others. M. Van Swieten deſcribes its effects with energy and accuracy. "Men of letters (ſays he) who lead "a ſedentary life, and ſicken over their "books, are on this account often expoſed "to an apoplexy, which creeps upon them "ſlowly and as it were by degrees. At "firſt they become languid; they delight "in eaſe and indolence; their underſtanding "grows dull; their memory decays and "fails them; they then grow heavy, ſleepy, "and ſtupid, and often remain long in "this wretched ſituation before they die. "It has given me much concern to ſee "learned men of the firſt claſs, who had "been very ſerviceable to literature, live "more than a twelvemonth after the loſs

" of their faculties, forget every thing, and " at laſt die of an apoplexy (*n*)."

§ 21. The want of exerciſe produces its effects firſt upon thoſe veſſels which are naturally weak, and therefore require the more aſſiſtance to keep up the motion of the fluids in a proper degree of velocity; ſuch are eſpecially the viſcera of the abdomen, deſigned for the important functions of digeſtion. The ſtomach grows feeble, the juices inſervient to digeſtion ſecreted in it are altered, digeſtion is languid, troubleſome, and imperfect, becauſe the digeſtive powers being leſſened, the food cannot undergo the neceſſary changes; on the contrary, they become putrid, as they would in any other place where they were expoſed to the ſame degree of heat and moiſture. The vegetables depoſit their (14) acid, which

(*n*) T. 3. p. 263.

(14) Though an impaired digeſtion certainly diſpoſes (what would otherwiſe prove) our aliment to a corrupt and unwholeſome ſtate, yet it is pretty certain that all vegetables, and particularly many which enter into our daily food, are not acid, but even alkaleſcent. The learned and ingenious Dr. Arbuthnot ſays, in his excellent Treatiſe of Aliment, " The " olera, or pot-herbs, afford an excellent nouriſh- " ment; among thoſe are the cole or cabbage kind, " emollient, laxative, and reſolvent; alkaleſcent, and " therefore proper in caſes of acidity." He afterwards terms " all kinds of garlic, onions, leeks, and " celery, the anti-ſcorbutic plants; carrots, turneps, " eringo roots, aſparagus, horſe-radiſh, muſtard and " cabbage, anti acids; and adds, that many vege- " tables

which irritating the nerves, produces pains, cramps, a ſourneſs, which brings on a perpetual

" tables, being corrupted, eaſily reſolve themſelves " into a fetid, oily, alkaline ſubſtance." To this liſt we may probably refer radiſhes of all kinds, creſſes, and ſpinage, which laſt plant is diſagreeable to many without vinegar. This liquid, we find from Horace, was alſo added to coleworts as a proper and agreeable ſeaſoning; and I have known a few with whom cabbage diſagreed, except with this corrector, as it may be called, with reſpect to ſuch ſtomachs.

——————cornu ipſe bilibri
Caulibus inſtillat, veteris non parcus aceti. HOR.

A majority of vegetables, nevertheleſs, may be termed acid and aceſcent; notwithſtanding the animal powers and commixtures may, and do, reduce the juices from ſuch to a neutral, or even alkaleſcent ſtate. There may probably be ſome difference with reſpect to the diet of cattle and of ſheep, eſpecially of ſuch of the latter as feed upon heaths or mountains, which abound with wild thyme or other aromatic herbs.——But to return more cloſely to our text—If vegetables, of whatever kind, beget a conſiderable acrimony in the ſtomachs of ſtudious ſedentary people, or of any people, it will be morbific, whether acid or alkaline. I confeſs at the ſame time, experience has ſufficiently aſſured me, that ſome perſons advanced in years have been judiciouſly reſtrained to a milk and vegetable diet, when animal food manifeſtly diſagreed with them. They have throve and been chearful upon it, recovering of their former indigeſtions and valetudinary chronical complaints. I knew a gentleman, who died at about ſeventy-two, who, when turned of ſixty, was adviſed by his phyſicians to a mild vegetable diet, in which he perſevered with manifeſt advantage for ſeveral years, and recovered his digeſtive powers ſo conſiderably, as to return to a chearful mixture of animal food, with little or no

petual ſenſation of heat at the pit of the ſtomach and in the throat, called the heartburn, and the teeth are ſet on edge, &c. The fat grows rancid, the eggs and meats become putrid, from whence ariſe nauſeæ, parching thirſt, a ſlow fever, perpetual diarrhœas, a general debilitation, and a ſenſation of uneaſineſs not to be expreſſed. The ſaponaceous juice conſtantly exhaling from the ſmall veſſels of the ſtomach, not only loſes its power of diſſolving the aliment, but being itſelf inſpiſſated, gluiſh, and hard, is collected into lumps, which deſtroy the appetite, and occaſion a continual ſenſation of cold and weight in the part.

§ 22. The inteſtines, whoſe organization is the ſame as that of the ſtomach, are liable to the ſame accidents; and reſpiration, which when ſtrong, during the act of in-

complaint from it, during the four or five laſt years of his life.

I muſt not cloſe this note without obſerving, that Dr. Tiſſot is not diſcouraging his ſtudious readers here from the uſe of vegetables, but only declaring the bad effects of too intenſe and unremitted ſtudy, without ſufficient corporal exerciſe, be their diet what it will: and yet in fact a conſiderable proportion of vegetable food (when there is no ſtrong antipathy to, nor conſequent diſorder from vegetables) ſeems highly proper for thoſe, whoſe inactivity and debility render their ſtomachs leſs adequate to a proper comminution of more fibrous and tougher animal food. It will be a very ſalutary caution to obſerve in ſuch circumſtances, that their vegetables ſhould be boiled rather very well, than very faſhionably. K.

ſpiring,

ſpiring, preſſes on the contents of the lower belly, and thereby aſſiſts the circulation in them; the action of reſpiration, I ſay, being greatly ſlackened from the want of muſcular exertion, by which it is powerfully excited; theſe organs become weak, coſtiveneſs enſues; collections of ſlimy matter, common among learned men, are formed as in the ſtomach, from whence many diſeaſes are derived. This happened to Juſtus Lipſius, profeſſor of hiſtory, who tho' adviſed by his friend and collegue the celebrated Heurnius, yet he ſuffered for a long time, and was not cured till he had voided a maſs of the form and colour of the inteſtines. It was a kind of gluiſh viſcous ſubſtance, formed by his ſedentary life, which had gradually filled up the inteſtinal tube; and becoming putrid, had diſordered the whole animal œconomy; but the cauſe being deſtroyed, the patient was ſoon reſtored to health (*o*). The excrements thus heaped up, preſs upon the neighbouring parts by their bulk, irritate the inteſtines by their acrimony, and infect the whole maſs of fluids by their putrefaction: from hence thoſe excruciating colics, the torments of learned men, which are the more difficult of cure, as they are inceſſantly renewed by

(*o*) Adam vitæ medicorum, p. 372. Fernelius takes notice of a diſeaſe exactly ſimilar to this, which attacked a foreign embaſſador at Paris, who was cured, as Juſtus Lipſius was, by evacuating a prodigious quantity of hardened ſlimy matter.

errors in diet (*p*): from hence thoſe flatulencies, the conſtant attendants of ſedentary perſons, which bringing on a variety of ſymptoms, may ſometimes be miſtaken for other diſorders.

§ 23. The ſtomach and inteſtines are not the only ſuffering viſcera of the abdomen; the reſt being in the ſame ſtate of inaction, are liable to ſimilar complaints. The pancreatic juice thickens and becomes uſeleſs; the functions of the ſpleen are diſturbed; and the organs, which ſecrete and prepare the bile, are entirely diſordered; the bile ſtagnating obſtructs the liver, becomes inſpiſſated and hard, is no longer conveyed into the duodenum to aſſiſt in ſecondary digeſtion, the chyle ſtagnates in the ſmaller inteſtines, is vitiated, and theſe parts become the ſeat of the moſt alarming diſorders. The portion of bile incloſed in the gall-bladder, in order to go through another proceſs, which make it of greater efficacy, thickens in the part, and forms calculi, commonly called gall-ſtones; from whence proceed the moſt excruciating colics, which admit of no cure till the ſtones can paſs into the bowels, and be carried off by ſtool. When they are either too large to paſs through the ductus choledochus, or

(*p*) In the Journal de Medicine, t. 1. p. 352, we find a very intereſting account of a ſevere colic, cauſed by application and continually ſitting up at night, and which returned very frequently.

that

that the neceſſary propelling powers, or the circumſtances requiſite to facilitate their iſſue are deficient; or when they are ſituated in parts from whence they cannot find a paſſage, as it happened to St. Ignatius Loyola, who had them in the vena portarum (*q*), the afflicted perſons muſt ſuffer throughout the courſe of their lives, and at laſt expire in torments. If, inſtead of growing hard, the bile ſhould putrify, it acquires an exceſſive degree of acrimony, which irritates, gnaws, inflames, and ulcerates all theſe organs, and is productive of the moſt terrible diſeaſes, inaſmuch as they are accompanied with the moſt violent agonies; ſo that I have ſeen men of letters, poſſeſſed of the ſtrongeſt reſolution, reduced by them to a ſtate of deſperation they were aſhamed of, in moments which afforded them ſome little reſpite.

§ 24. The hypochondriac diſeaſe may alſo be reckoned among the evils learned men are expoſed to from that kind of inactive life, which diſturbing the circulation in the abdominal viſcera, produces obſtructions in them. This complaint is of two kinds; one entirely nervous, which we have before obſerved to be the effect of attention; another, wherein the contents of the lower belly are all ſtuffed up, and the powers of digeſtion diſordered. The conſtant cauſe of this

(*q*) His body was opened by Columbus the famous reſtorer of anatomy. Van Swieten, vol. 3. p. 87.

is a life of inactivity; and we may eaſily account for the frequency of theſe diſeaſes among men of letters, from ſuppoſing a concurrence of theſe two cauſes, which will alſo render them leſs ſuſceptible of a radical cure (*r*). Inſtances of theſe caſes are ſo common, that it may be needleſs to adduce any: if, however, one ſhould be expected, I ſhall produce that of Swammerdam, that accurate obſerver of nature, who was ſo tormented with an atrabilarious complaint, that he ſcarce gave any anſwer to thoſe who aſked him queſtions; he only looked at them, and remained motionleſs. When he got up into his deſk, he was oftentimes fixed and aſtoniſhed, as if he had been ſpeechleſs, and took no notice of any objections made to him. Not long before his death he was ſeized with a melancholy madneſs, and in one of the paroxyſms burned all his writings; he at laſt periſhed, thin and dried up as a ſkeleton, ſcarce preſerving the appearance of human form (*s*).

It has been long ſince obſerved indeed, that this kind of melancholy may be uſeful to learning, becauſe melancholy perſons, being fixed to one idea, are able to conſider

(*r*) Ci dimoſtra l'eſperienza che i litterati ben che foſſero di giovale temperamento, diventano a longo endare fiſſi, taciturni, pallidi, macilenti & ſtranamente beſſagliati da paſſione ipocondriaca, tiranna conſueta di gente ſtazionaria. Anton. Felici Diſſertazioni Epiſtolar. p. 203.

(*s*) Boerhaave Prælect. ad Inſt. § 896. t. 7. p. 275.

the

the ſame object in all its views, and without having their attention diverted. But can any man be ſo far out of his ſenſes, as to wiſh the perſpicuity of his judgment to be increaſed by ſuch means? Learning, when exchanged for health, is certainly purchaſed at too high a rate; and ſcience becomes uſeleſs if it deprives us of happineſs.

Nature indeed has provided ſome men with ſuch athletic ſtomachs, ſtrong nerves, and as it were bowels of iron, that they can bear the labours of the mind, and a ſedentary life, and can indulge in all kinds of exceſs without diſordering their digeſtion; but they are not exempt from other diſeaſes; their veſſels are filled with too great a quantity of blood; the cells containing the fat are choaked up, the internal parts are compreſſed on all ſides, and they become heavy and ſlothful; they are thrown into a ſweat by the leaſt motion, and are ſoon out of breath; they die at an early time of life, either by an apoplexy, a ſuffocating catarrh, or ſome one of the many diſeaſes occaſioned by a plethora; ſo that it has been juſtly obſerved, to be oftentimes an inconvenience to men of letters to have too ſtrong a ſtomach (*t*).

§ 25. A ſedentary life weakens the whole ſyſtem of the animal œconomy. When the blood is once in a vitiated ſtate, it injures,

(*t*) This obſervation is of Lancifi de Mort. Subitan. lib. 1. cap. 22.

ſooner or later, all the parts it circulates through. The lungs, whoſe ſubſtance is extremely delicate, the firſt part to which the chyle is conveyed, and through which the whole maſs of blood paſſes, in order to undergo ſome important change, ſoon feel the effects of the depravity of this fluid; heats are felt in the breaſt, pains between the ſhoulders; a cough, and troubleſome ſpittings come on; the lungs are filled with a tough viſcid ſubſtance, which forms obſtructions, and often brings on an aſthma; inflammations, ſuppurations, and abſceſſes are formed, and a hectic fever enſues. The famous Triglandius, after having ſuffered great pains, died of an abſceſs in the lungs, proceeding from a cachectic diſpoſition his ſtudies had brought him into, and which could not be removed, even by Mr. Boerhaave's care and attention (*u*). Swammerdam uſed to ſpit up ſmall ſtones long before his death, and his lungs were found full of them.

§ 26. Intenſe ſtudy produces alſo the ſtone and other diſeaſes of the bladder. Heurnius, Caſaubon, Beverovic, Sydenham, and many others, are melancholy inſtances of this; and no body is unacquainted with the ſufferings which the illuſtrious (15) antagoniſt of the ſciences is expoſed to from complaints of this nature.

(*u*) Marckii Orat. funebr. in obitum Triglandii Leip. 1705.

(15) This probably is intended for Mr. Rouſſeau.

§ 27. Ano-

§ 27. Another fatal conſequence of a ſedentary life, is the leſſening of inſenſible perſpiration, the preſervation of health depending much on the regularity of this copious and important evacuation. The veſſels through which it is conveyed, are ſmall and weak, very diſtant from the heart, and much expoſed to external injuries. It muſt therefore neceſſarily be interrupted, unleſs the circulation is aſſiſted by muſcular action, and unleſs that power is ſufficiently exerciſed to enable the veſſels to propel their fluids in ſuch a manner, that the ſecretions may be properly prepared and expelled through the reſpective outlets nature has appointed for that purpoſe. As ſoon as this perſpiration becomes obſtructed, the redundant humours it ſhould have cleared the body of are retained, corrupt the maſs of fluids, depoſit themſelves upon ſome organ, and produce pains and defluxions. From hence alſo that phlegm ſo common to the learned, of which Horace complains ſo much, which, after reading for a long time together, often produces coughs and ſtoppages of the noſe, more or leſs troubleſome; and laſtly, irregular fevers are brought on, not to be traced from any other cauſe, of which Galen has preſerved a remarkable inſtance in the caſe of Premigenes: "This famous "Peripatetic philoſopher, who paſſed all "his time in writing and reading, and "whoſe perſpiration was therefore defec-

" tive, was ſeized with a febrile paroxyſm " every day when he neglected to bathe; " but the bath carried off this acrid hu- " mor, which when kept in occaſioned the " fit (*x*).

§ 28. We have ſeen that the nerves are immediately affected by the labours of the mind; inactivity is alſo ſufficient to deſtroy them, and often produces this effect, even in perſons whoſe mind is as indolent as their body. The nerves are the principal parts of the machine; whenever any of the animal functions are diſturbed, they muſt undoubtedly be injured. When I have ſeen the nerves affected without any ſenſible cauſe, I have often been led to ſuppoſe that ſome diſeaſe would ſoon appear, the ſource of which might poſſibly be diſcovered by attentive obſervation, and be the more eaſily deſtroyed before the diſeaſe had come to any height. Some diſorders, of the ſtomach, eſpecially ſhew themſelves more readily by the effects they have on the nerves; for they being a kind of medium (16) between the ſoul and the body, are

(*x*) Galen de ſanitat. tuend. l. 5. cap. 11.

(16) Doubtleſs theſe cords, with their impalpable contents, conſtitute the nexus, the immediate link, of this further impenetrable union of mind and matter; whence their reciprocal influences ariſe, and thought itſelf is materialized into an object of ſight, and communicated by ſound. The continual inſtances of this amazing hypoſtaſis ſeem, among the vulgar, to have annihilated this unveilable myſtery; ſo that, as one of our dramatic writers expreſſes it, "prodigies, from " their frequency, have loſt their name." K.

expoſed

expoſed to ſuffer from the irregularities of each, and communicate to the one the injuries they receive from the other: thus it is that the ſoul becomes prejudicial to the body, and the body hurtful to the ſoul, and that they are both combined in deſtroying the nervous ſyſtem.

§ 29. The ſeminal fluid which many great men have thought to be ſimilar to the nervous juice, partakes of the general diſturbance, and loſes much of its active power. If we argue from this poſition, and conſider at the ſame time how much each part of the father contributes to the formation of the ſon, we may perhaps find out the reaſon why it ſo ſeldom happens, that men of great learning are bleſſed with children worthy of their parents. The animated particle which Harvey calls the punctum ſaliens, does not open itſelf in the firſt inſtance with ſufficient ſtrength; the effects of this primary weakneſs are carried through life; and the impreſſion falls more diſtinctly upon the organs of thinking, in as much as the father's brain has not allowed this vivifying fluid to be prepared in ſuch a manner, as to communicate ſufficient force (17) to the ſon's.

§ 30.

(17) There is ſomething ingenious and very fanciful in this paragraph, though perhaps not quite ſatisfactory, on this abſtruſe ſubject. It ſhould ſeem, phyſically ſpeaking, as if the moſt healthful and compleat ſtate, in the minds and bodies of the parents, were the likelieſt

§ 30. The cauſes which deſtroy the digeſtions, exhauſt the nerves, impoveriſh the blood, and diſturb all the evacuations, muſt inevitably bring on a loſs of ſtrength, and this is another effect of intenſe application. When H. Briggs publiſhed his tables of logarithms, it was his intention to go on with them; but the attention of his mind had ſo totally debilitated his body (*y*), that he could never recover.

likelieſt concurrents to a correſpondent perfection of the offspring: but if great endowments and faculties were very generally hereditary, it would excite individuals, who are apt to be abundantly conſcious of their own importance, to think ſtill more arrogantly of themſelves, more contemptibly of their neighbours, and would diſpoſe them to liſten leſs to the manifeſt dependance of all on the Supreme Cauſe. Procreation, as it may very ſignificantly be tranſlated into, "a "vicarious and inceſſant renovation of beings," muſt be philoſophically, and even theologically, contemplated, as an unremitted energy and influence of the omnipotent Creator; (whatever irregularities may attend it in this imperfect ſtate) and he alone, who ſaw the perfect competence of order here, and perhaps throughout univerſal and eternal nature, could diſpoſe the events of procreation according to perfectly œconomical and diſtributive wiſdom. Were we to inſiſt on phyſical reaſons for the degeneracy of ſons from the virtues or talents of their celebrated fathers, the cauſes and accidents that might, in our apprehenſion, conduce to it, would be too various and complex to afford us a ſatisfactory ſolution. It is equally difficult alſo to diſcover, whence a great genius ſometimes deſcends from parents, who never diſcovered any: and both theſe reſearches, being certainly metaphyſical, muſt be conſequently inſolvable by us. K.

(*y*) Saverien hiſt. des progr. de les pr. humain, &c. p. 460.

"Although,

" Although, ſays M. de Fontenelle, M. de " Varignon's conſtitution ſeemed likely to " reſiſt any labour whatever, yet the aſſi- " duity and intenſeneſs of his application " brought a heavy diſeaſe upon him; ſo " that he was dangerouſly ill during ſix " months, and remained for three years in " a ſtate of conſumption, which was evi- " dently an exhauſting of the ſpirits (*z*)." Others fall into ſuch a general relaxation, that their fleſh becomes ſoft and flaccid, their pulſe feeble, their gums ſo looſe that the ſound teeth fall out of them without pain. If in this ſtate of weakneſs acute diſeaſes ſhould come on, they will be attended with ſo much the more danger; and a celebrated Engliſh phyſician has obſerved, that acute diſeaſes of the mildeſt nature to other perſons, were ſometimes fatal to men of letters (*a*). Want of ſtrength makes the progreſs of a fever irregular, haſtens the putrefaction of the humors, confuſes the brain in the beginning of the diſeaſe, prevents the operation of medicines, diſturbs the regular formation of a criſis, and the patient, deprived of his natural powers, can no longer be aſſiſted by (18) thoſe of

(*z*) Dans ſon eloge, œuvr. t. 6 p. 94.

(*a*) Morton de variolis, cap. 6. oper. omnia, p. 382.

(18) We may ſuppoſe this to have been the caſe of moſt incurable diſeaſes; if we except thoſe, in which the reſources of nature have been rendered ſtill more ineffectual, under an injudicious conduct, from the erroneous efforts of art. K.

art.

art. I have lately ſeen a melancholy inſtance of this, in the caſe of our worthy rector whom we have lately loſt *(b)*; who, if the wiſhes of the public might have prevailed, would have lived to a very advanced age, but whoſe conſtitution was ruined by ſtudy. The firſt appearance of his diſeaſe was attended with ſuch an exceſſive debility, that even then I deſpaired of his recovery, and foreſaw the irreparable loſs which religion, virtue, the church, his country, his afflicted family, and the youth of this academy, have lately ſuſtained: what a man, gentlemen; what a collegue; what a friend has been taken from us? Like to the Roman of whom Pliny has given us a deſcription *(c)*, his life was pious: he was ſcrupulouſly nice in fulfilling all his duties, how extenſive ſoever they were: he was unchangeably benevolent and mild; reſpected, but not feared; for though an enemy to vice, he knew not how to hate the perſon who was guilty of it: he was deeply learned, very eloquent, and there was a great deal of matter in his diſcourſes: his ſtyle was ſoft, fluent, diverſified, and marked with that ſublimity which ſubdues the heart, and enſlaves the paſſions: during his life he was univerſally eſteemed, and is

(b) M. J. Alph. Roſſet, profeſſor of divinity, and made rector a few months ſince.

(c) Euphrates, vid. Plinii Cæcilii, epiſt. lib. 1. epiſt. 9.

now

now moſt ſincerely and painfully regretted. But it is time to reſume my ſubject.

§ 31. Attention of the mind and inactivity of the body are the two principal, but not the only cauſes of the diſorders incident to the learned: others are ſtill to be pointed out; and the firſt which offers itſelf to my conſideration, is the (19) attitude of a man at ſtudy; an attitude, which cannot but be prejudicial to health. The folds the veſſels are thrown into at the top of the thigh and in the bend of the knee, while a man is ſitting, interrupt the circulation in the lower extremities, which in proceſs of time muſt neceſſarily ſuffer from this circumſtance; the bending of the body conſtrains the abdominal viſcera, diſturbs their functions, and the digeſtive powers are diſordered from a new cauſe; the ſtomach being often compreſſed, is more particularly injured, and this irritation, together with what it ſuffers from the tenſion of the brain, and from want of motion, makes learned men more liable to the diſeaſe commonly called the heart-burn (*d*).

(19) This conſiderable inconvenience of an unhealthy attitude may be palliated, or leſſened, by walking at intervals, while a ſtudious perſon thinks, which does not always retard thought: and by reading and writing, ſometimes, in a ſtanding poſture, at a deſk, which may be raiſed to different and commodious heights, by a ſcrew, round which it turns. K.

(*d*) Aretæus, Cœlius Aurelianus, and Ætius, have before obſerved, that this was a diſorder common to the learned. See eſpecially a valuable diſſertation of M. Richter's De Cardialgia, Goetting. 1750.

The

The blood aſcending with difficulty through the veins of the lower belly, accumulates in the hæmorrhoidal veſſels, where its own weight carries it, and where it meets with the leaſt reſiſtance: for this reaſon the learned are ſo frequently tormented with the piles, a fatal diſeaſe; which has been for a long time conſidered as a uſeful evacuation, carefully to be kept up; but the dangers of which have been at length expoſed by ſome eminent phyſicians (*e*), and I have alſo taken notice of them, in another work (*f*). They have ſometimes proved ſalutary, as all other hæmorrhages have; but are ſo very dangerous, that when any patient is likely to be afflicted with them, it behoves every prudent phyſician to endeavour to prevent them; in which attempt I have often been happily ſucceſsful.

§ 32. Night-watchings may be conſidered as a fourth cauſe of the diſeaſes incident to the learned; they are hurtful to them on ſeveral accounts.

1ſt. A man who has laboured all day, certainly works too hard, if his labours are continued through a part of the night.

2dly. The time allotted to ſleep is by this means too ſhort, and therefore not ſufficient to reſtore us.

3dly. Sleep, which comes after long attention of the mind, is never quiet and calm;

(*e*) Vid. Mr. de Haen's excellent diſſertation, Theſes pathologicæ de hæmorroidibus, Viennæ 1759.

(*f*) Epiſtol. Zimmermanno, p. 19, &c.

it

it falls ſhort of the effect it ſhould produce, becauſe the fibres of the brain continue their oſcillations; we are not able to get rid of our thoughts, and therefore cannot reſt: and if ſleep ſhould ſteal upon us, it is rather a kind of ſlumber, during which our ideas fatigue us without being uſeful, than an entire lulling of the ſenſes denoting a ſound ſleep. The antients, more prudent than we are, were better acquainted with this danger, and therefore judiciouſly divided the time between buſineſs and recreation; they ſeldom employed their evenings in ſerious (20) occupations: and Aſinius Pollio, that famous Roman conſul and orator, who firſt formed a library at Rome, was ſo well apprized of the dangerous conſequence of ſtudying at night, that he would not even read any letters after the tenth hour; that is, two hours before ſun-ſet (*g*).

4thly. The laws of nature are ſubverted by nocturnal labours, for nature ſeems to have allotted the beginning of the night to reſt; ſhe ſeems to invite us to ſleep by the temperature of the air, which is then more

(20) This is alſo the prudent conduct of many modern and temperate writers, as they may be termed, whoſe works are probably the more correct and better digeſted, for not being too voluminous. The moderate exerciſe of ſuch in the afternoons, and the temperate relaxation of their evenings, muſt very generally conduce to their more ſound and refreſhing ſleep at nights; and thence render them the more alert and adapted to ſtudy in the ſucceeding mornings. K.

(*g*) Seneca de tranquillitat. anim. cap. 15.

damp,

damp, more cold, and leſs wholeſome, by the darkneſs and ſilence which prevails, and by the example of all living beings. Moſt animals feel a diminution of ſtrength at the ſetting of the ſun, and generally give way to ſleep till it riſes again, reſtoring ſalubrity to the air: ſeveral plants paſs into a ſtate which has been rightly called their ſleep. Shall the man of letters then divide the buſineſs of the night with villains and wild beaſts?

The dangerous effects of night air are ſo evident in ſome perſons, that M. Van Swieten knew a man troubled with the gout, who could not read even a letter after ſunſet without haſtening the fit. It is as dangerous to meditate in bed, as it is to go to-bed too late. I have already obſerved, that meditation determines a greater quantity of blood to the brain, and in this caſe the circumſtance is facilitated by the horizontal poſition of the body; it is increaſed by ſleep coming on, and therefore this organ muſt unavoidably be injured by this bad cuſtom, as all the body ſuffers for want of ſleep, the conſequence of literary watchings. We grow weak and are ſeized with violent head-aches, the nerves are tired out, their motions become irregular, our ideas are confuſed, and we fall into a real delirium, which might perhaps be relieved by quiet and ſound ſleep, if in ſuch a ſtate we could expect to obtain it. Sleep is reſtored with more

more difficulty than any other of the animal functions when diſturbed: we loſe it with chearfulneſs, and regret the loſs of it, almoſt always in vain, with ſorrow. I have now a letter juſt received from a lady fifty years of age, who begins the account of her complaints in this manner: "I was born with "a good conſtitution; but in my earlieſt "youth having paſſed ſome part of the "nights in reading, I found myſelf at the "age of eighteen in a ſtate of dejection, "which laid the foundation of my diſor-"ders: I was ſeized with defluxions, &c. "and was diſturbed with want of ſleep, "often troubleſome to me at this day, and "the effects of which I have ever felt."

5thly. The oily vapours ariſing from the candles we uſe to give us light, contribute ſtill to increaſe the danger of ſtudying at night, by corrupting the air, and making it equally pernicious to the eyes, the nerves, and the lungs: if we burn wax the danger is not ſo great, although it ſtill ſubſiſts to a certain degree.

§ 33. The confined air men who live among their books, conſtantly breathe, is a fifth cauſe, not ſufficiently attended to, of the evils to which they are expoſed. A pure, open, country air is very refreſhing, facilitates breathing and perſpiration, gives ſtrength, and enlivens the whole machine. Every individual muſt have felt the truth of theſe aſſertions, and muſt therefore be

ſenſible how very uſeful ſuch kind of air would be to men of letters; but inſtead of enjoying the benefit of it, they generally live in an atmoſphere, which being ſeldom renewed, is denſe, full of vapours, and inelaſtic; by this they are heated rather than refreſhed, become heavy inſtead of being animated, and are more relaxed than ſtrengthened: beſides that, this air, inſtead of promoting, obſtructs perſpiration, and thereby increaſes the bad effects proceeding from the other cauſes prejudicial to the learned. Not to renew the air of one's room, is to live in the impurities of the preceding day, and yet what hard ſtudent is there who thinks of letting freſh air into his chamber every day?

§ 34. This neglect, ſo frequent among the learned, with regard to the air they breathe, extends ſometimes to their perſons. I have ſeen ſome who attended ſo little to cleanlineſs, that the ſight of them was nauſeous, and who thereby expoſed themſelves to all the diſeaſes proceeding from ſlovenlineſs, which may be a ſixth cauſe more dangerous than it is commonly ſuppoſed to be (*b*), and one of the moſt pernicious effects of which is the leſſening of perſpiration. The uncleanlineſs of the

(*b*) One of the greateſt phyſicians Germany ever produced has given us a very excellent diſſertation on this ſubject, J. Z. Platneri diſſertatio de morbis ex immunditiis, Lips. 1731, opuſc. t. 1. p. 70.

teeth even, which is ſo common, is alſo troubleſome and dangerous. If they neglect cleaning them, a thick and fœtid tartar is collected about them, from whence proceeds a nauſeous ſmell extremely diſagreeable to thoſe who come near them, and which depraves their own ſaliva, ſpoils their gums, cauſes frequent defluxions, ſharp pains, inflammations, abſceſſes, ulcerations all over the mouth, and at laſt brings on the loſs of their teeth, by which their ſtomach is deprived of the aſſiſtance of maſtication, ſo neceſſary to every one, and more eſpecially to the learned, who are ſubject to bad digeſtion; and who are already very liable to ſuffer from the bad cuſtom ſome of them have of reading at meal-times, and of ſitting down to buſineſs immediately after.

§ 35. This ſeventh cauſe, from the inconveniences of which few who venture to expoſe themſelves to them, can be exempt, is one of thoſe which ſooneſt attacks the ſtomach. The influence of the nerves is ſo neceſſary to carry on digeſtion, that if we tie the nerves going to the ſtomach in an animal, the food putrifies without being digeſted (*i*): ſo when the ſoul is ſo taken up that it ſuſpends the diſtribution of the animal ſpirits to the ſtomach at a time when they are moſt wanted, digeſtion muſt ne-

(*i*) Halleri oper. minor. t. 1. p. 359.

ceſſarily

ceſſarily be imperfect; the food remains there a long time and is ill prepared, ſo that a great quantity of air is ſet looſe from it, which irritates this viſcus, ſwells it, and leaves it ſtill weaker after this enlargement. Xilander, in his excellent letter to Plempius upon the diſeaſes a magiſtrate is expoſed to from his profeſſion, has been well appriſed of this, and expreſſed it in a manner ſuitable to the theory of the times, when he ſays, "that thoſe perſons who "ſubſtract continually from the heat of the "ſtomach, to keep up the functions of the "ſoul, cannot digeſt their food (*k*);" and Plempius in his work obſerves the danger of this bad cuſtom (*l*); neither has it eſcaped the notice of any of the phyſicians, who have written upon any part of diet, more eſpecially ſuch as have choſen to treat of that kind of diet ſuitable to thoſe who cultivated the ſciences.

§ 36. This thirſt after knowledge, equally ridiculous and blameable, which will not ſpare the time neceſſary for eating and drinking, brings on another indiſcretion, attended alſo with bad conſequences, and which I reckon as the eighth cauſe of the diſeaſes incident to the learned; this is the bad habit of keeping in the urine a long time, and deferring going to ſtool. Theſe excre-

(*k*) We find this letter in 1662 at the beginning of Plempius's work De Togatorum Valetudine Tuenda.
(*l*) P. 110.

ments,

ments, when too long retained, become putrid, irritate the inteſtines or the bladder, vitiate the mucus ſecreted in them, and make them become the ſeat of the moſt painful diſorders. The ſmall veſſels all the cavities of the body are filled with, abſorb the putrid particles, which being conveyed into the maſs of blood, corrupt it; and what is perhaps ſtill more fatal, the nerves after a while ceaſe to do their offices when called upon: oftentimes even extreme tenſion makes them paralytic; then the bladder and inteſtines have no longer the power of expelling the urine and the fæces (*m*), unleſs aſſiſted by art. At other times a diſorder appears, ſeemingly of an oppoſite nature, although it proceeds from the ſame cauſe, and varies from the former only as the palſy is fixed on a different part of the bladder; this is an incontinence of urine. I have been conſulted by ſeveral patients, who, from having kept in their urine too long, had loſt the power of retaining it, ſo that it flowed from them inceſſantly; and this is certainly one of the moſt diſagreeable

(*m*) Galen was well acquainted with this diſeaſe and its cauſes: and tells us that he has known many perſons who had loſt the power of making water from having retained their urine too long, either through abſence when they were buſy, through neglect, or through decency when they were at church, in the ſenate, at the bar, or at meals. De Symptomat. Cauſis. lib. 3. cap. 8. & De Loc. Affect. lib. 6. cap. 4. Charter. t. 7. p. 98 & 515.

inconveniencies, both to one's ſelf and others, it is poſſible to be afflicted with. This painful retention may be attended with more ſerious conſequences when continued too long; for every one knows the unhappy end of the immortal Tycho Brahé, who being in a coach with the emperor Rodolph the Second, from whom he received particular marks of favour, retained his urine too long, and forfeited his life by this reſpectful falſe ſhame.

§ 37. I ſhall not ſcruple to mention as the ninth cauſe of diſeaſes incident to the learned, the ſecluding themſelves from ſociety; a taſk many of them are willing to impoſe upon themſelves at firſt, and which they give way to afterwards from inclination, although attended with many real inconveniencies. Men were created for each other; their mutual aſſociation is productive of advantages not to be given up without ſuffering for it; and it has been very properly obſerved, that ſolitude brings on a conſumption (*n*). Nothing can contribute more to health than chearfulneſs, which is animated by ſociety, and damped by retirement; and this moral cauſe of wearineſs, added to the phyſical cauſes above-mentioned, often throws the learned into a melancholy, as fatal to their health as chearfulneſs would be beneficial to it: it brings on a miſanthropy, a

(*n*) Cicero de Officiis, l. 3. cap. 1.

fretful

fretful temper, a ſpirit of diſcontent, and a diſlike to every thing, which may be conſidered as the greateſt of evils, ſince they deprive us of the enjoyment of all that is good.

§ 38. Having pointed out the moſt general cauſes of the diſeaſes men of letters are expoſed to, I ſhall now take notice of thoſe which ariſe from the particular object of their attention, and of thoſe which are peculiar to certain organs. Anatomiſts have often violent (21) fevers, brought on by the infected air they breathe, and are ſubject to the diſorders which proceed from a corruption of the bile. The blood of dead bodies, in which their hands are conſtantly ſoaked, often makes the ſmalleſt (22) wound

(21) Fevers from this cauſe, I think, are generally of the putrid kind, and not remotely different from the jail or camp-fever. I knew a moſt eminent and aſſiduous anatomiſt, who was infected with one of them, from the cauſes Dr. Tiſſot mentions, and who did not recover his former health and his uſual plight, which was naturally thin and delicate, for ſeveral, I believe for near ſix months, from the invaſion of it. It was ſaid, I remember, that he underwent many evacuations, particularly bleedings, in the proceſs of this fever, which I confeſs I ſhould have judged neither correſpondent to the cauſe of his diſeaſe, nor to his own habit or conſtitution. The intention of theſe diſcharges was probably to obviate an inflammation: but the zeal and amity of his many phyſical friends ſeems to have rendered them very careful not to do too little for him. K.

(22) I have ſeen a ſtrong inſtance of this in an eminent ſurgeon, who having a ſlight ſcratch on the

wound or the ſlighteſt ſcratch fatal to them. Chymical experiments are alſo dangerous; ſeveral chymiſts have loſt their lives by them; and M. Boerhaave himſelf would have been ſuffocated by an acid vapour, if he had not been immediately relieved by an alkaline ſpirit, which happening luckily to be near him, this vapour counter-acted the acrimony of the firſt, and quieted the ſpaſm it was beginning to produce in the lungs. Some botaniſts have periſhed while they were ſearching for and examining plants; but theſe accidents belonging more properly to the diſeaſes of artiſts, I ſhall go on to thoſe which are more immediately inflicted upon ſome of our organs by ſtudy.

§ 39. The eyes, of which I have already ſpoken, are among the organs moſt expoſed to injuries. The continual fatigue they undergo, irritates them; ſometimes the eyelids and outward parts of the eye are inflamed; more frequently the nerves alone are attacked, without any perceptible external defect. I have ſeen ſeveral men in the prime of life, whoſe eyes were become ſo exceedingly irritable, that they could no longer bear the light, and were obliged to live and read in rooms ſo darkened, that I

middle finger of his left hand, contracted ſo very painful and dangerous an infection in it, from the diſſection of a morbid uterus, that a ſpeedy amputation of it was judged neceſſary, to prevent its further ill conſequences, which were very acute and menacing. K.

could

could ſcarcely diſtinguiſh letters of the largeſt ſtamp in them: candles eſpecially, which are very inconvenient on account of their ſmoke, and unſteady flame, they could not bear; neither could they ſuffer long the light of a ſlender wax taper. Others, when they have read a few pages, have their eyes full of tears, cannot ſee clear, and ſoon after cannot diſtinguiſh any thing. Diſorders of the ſight, produced by an exceſſive mobility of the nerves of the eyes, whether proceeding from too much reading or from any other cauſe, are very different and ſingular: I have collected many intereſting obſervations upon this ſubject, which will take place more properly in another work. I ſhall therefore conclude this article with obſerving, that men of letters often imagine they have ſparks before their eyes; of which complaint M. Zimmerman, who has once been ſubject to it, has treated very largely, and with great ſkill, in the work I have before quoted ſeveral times. This ſenſation takes place whenever the mobility of the optic nerves is arrived to ſuch a pitch, that although they are not affected by the external impreſſion of fire, yet, in conſequence of the diſordered ſtate in which they are, they experience the ſame lively ſenſations and motions as the preſence of that element would really create.

§ 40. Orators are alſo expoſed to fatal diſeaſes produced by their profeſſion. Reading

loud ſometimes does the lungs good; I have even preſcribed it with ſucceſs in ſome diſturbances of the digeſtive powers; but a forcible and continued declamation, during which reſpiration is continually interrupted, is very hurtful to the lungs, irritates, heats, and inflames them. From hence ariſe hoarſeneſs, loſs of voice, heat in the breaſt, a cough, ſpittings of blood, ſuppurations, hectic fevers, a general debility, and at length a conſumption: thus theſe uſeful men diſappear, as a lamp which has only ſhone to give light to others. Cicero was threatened with theſe complaints; the phyſicians apprized him of it, and adviſed him to quit the bar for two years: he followed their advice; reſt ſoon ſtrengthened him, and reſtored him to that health which labour had impaired.

We have moſt reaſon to be concerned for preachers, who have no other duty in the church than that of repeating their ſermons; and counſellors, whoſe buſineſs conſiſts entirely in drawing up the proceedings of a law-ſuit, and afterwards in pleading. Theſe men deſtroy their healths in two ways; firſt, by aſſiduous application, as other men of letters; and ſecondly, by declamation, which they muſt be the more affected with, inaſmuch as their lungs, accuſtomed to that languid circulation, the conſequence of a ſedentary life, are little able to ſupport ſuch powerful exertions.

§ 41. Great

§ 41. Great actors are liable to the ſame diſeaſes as orators are. The famous Moliere died of a ſpitting of blood, after having acted in one of his own comedies with a great deal of ſpirit; others have had the ſame fate, after a laborious part in a tragedy.

Muſicians eſpecially, often die of complaints in the breaſt; and after death we frequently find their lungs inflamed, ſuppurated, and ulcerated. M. Morgagni has ſeen a young man who was thrown into a phthiſis, by too frequently exerciſing a very fine voice: the ulceration of the lungs extended from the trachea to the larynx and throat; and he was ſuffocated in attempting to ſwallow the yolk of an egg (*o*).

Curates and prieſts are much leſs liable to miſchiefs than preachers and pleaders at the bar, becauſe thoſe among them who chuſe to cultivate the ſciences, are prevented from carrying this paſſion to an exceſs, by the duties of their calling, which forces them to quit their ſtudies. Phyſicians have the ſame advantages; and the care they are obliged to take of the health of others, prevents them from deſtroying their own. In ſhort, happy are all ſuch learned men, who are called away from their books by the duties of their profeſſion; their body is exerciſed; and although their

(*o*) De Sedibus & Cauſis Morborum, t. 1. p. 228.

organs, and they are attacked with inflammatory diſeaſes, the conſequence of irritation long kept up in vigorous habits. Sometimes they expire in the firſt attack; more commonly they get the better of that; and if they find themſelves perfectly reſtored, their conſtitution recovering its vigour, they give themſelves up again to the ſame labours, and fall again into the ſame diſorders. There are frequent inſtances of robuſt young men cloſely applied to ſtudy, who are attacked with inflammatory fevers every year: at laſt, in proceſs of time, being worn out by theſe attacks and by their labours, they loſe their ſtrength, and are ſeized with conſumptive diſeaſes, againſt which they are no longer able to reſiſt.

§ 45. Study produces alſo various effects, according to the different times of life in which we apply to it, and is particularly fatal to infancy. I have known very ſenſible children ſeized with this literary kind of phrenzy, unſuitable to their age, and have foreſeen with concern the fate which attended them: they are at firſt prodigies, and in the end become idiots. Exerciſe, which ſtrengthens the body, is adapted to this age rather than ſtudy, which enfeebles it, and ſtops its growth. Nature cannot ſucceſsfully lead on two ſuch ſwift progreſſions together. There are examples of children who have grown up wonderfully faſt, and the laſt Memoirs of the

Royal

Royal Academy of Sciences ſpeak of a child of the province of Languedoc, who at ſix years old had attained to the height of a tall man. But in theſe remarkable caſes the mind remains ever in a ſtate of childhood; and even the premature forces of the body, which have acquired no ſolidity, decay with as much rapidity, as they had before advanced; ſo that theſe prodigies die at twelve or thirteen years old. When the progreſs of the underſtanding is too quick, that the genius manifeſts itſelf very early, and that a degree of application ſuitable to this progreſs is allowed, the growth of the body is impeded, becauſe it is unaſſiſted by the nervous influence, the ſtrength is exhauſted, and an early death ſucceeds, after the body has ſuffered many painful diſeaſes. M. Phil. Barratier is a well known inſtance of this kind: "At "eight years old he underſtood Hebrew, "Greek, Latin, and French, perfectly "well, beſides German, which was his "native tongue; at ſeventeen years of "age he was the moſt learned man in Eu-"rope; but from his earlieſt infancy he had "ever been ſubject to defluxions, and other "ſlight indiſpoſitions. At eighteen he was "ſeized with a cough, and in the courſe of "the ſame year, with an infinite number "of other diſeaſes; he loſt his appetite "and his ſleep, and at length wiſhed for "nothing ſo much as to be releaſed from

" all his ſufferings, which happened to him " at the age of nineteen years and a few " months." " I have ſeen (ſays M. Boer- " haave, a young man whoſe knowledge " was univerſal; he was a prodigy of eru- " dition, but did not live to the age of " five and twenty years; and another, ex- " tremely learned alſo, who ſtudied day and " night, and who died in a decay at the age of " nineteen, without any certain ſymptoms " of any diſeaſe (*p*)." We have alſo ſeen one of our fellow-citizens, a man born with uncommon abilities, whoſe active and penetrating mind gave itſelf up entirely to reflection and ſtudy, at a time when he ſhould have been acquiring ſtrength; by theſe means he was reduced, during ſeveral years, to the moſt dangerous and miſerable ſtate of languor: an uncommonly ſevere diet, and an interruption of his ſtudies began to reſtore him to health; he then unfortunately forgot that his conſtitution was delicate, and periſhed in the prime of life, a victim to the labours of his mind (*q*).

In my Advice to the People I have pointed out the injuries the children of our peaſants are expoſed to from being oppreſſed with labour beyond their ſtrength; and it may be collected from what has been already mentioned here, although much more might be ſaid upon the ſubject, that much

(*p*) Prælect. ad Inſtitut. § 1056. t. 7. p. 346.
(*q*) M. Philippe Loys de Chezeaux.

greater

greater miſchiefs ariſe from children being over-burdened with literary employments. Severe parents or maſters who require ſuch kind of application, treat their children as gardeners, who want to ſell the forward fruits, treat their plants; they ſacrifice ſome, to force others to produce flowers or fruits which never laſt long, and are in every reſpect inferior to thoſe which are ſuffered to come to maturity at the proper ſeaſon: but the end is anſwered; the gardener's ſkill in preparing his hot-beds and taking care of his green-houſe is extolled, and people are aſtoniſhed at the produce of his garden. There is not perhaps a more cruel and uſeleſs reſtraint than that which obliges children to ſtudy hard, and requires them to make much progreſs in learning; it is the ready way to deſtroy their health as well as their talents; and notwithſtanding all the powerful arguments urged by great men againſt this cuſtom, it is ſtill too prevalent amongſt us (*r*).

The

(*r*) I always think with pleaſure on the laſt will of Anaxagoras, that famous philoſopher, who firſt taught that this world was created by an intelligent Being. When perſecuted at Athens under pretence of irreligion, he retired to Lampſacus, where he was treated with all the reſpect he deſerved, which was even carried ſo far that an altar was raiſed to him. "The "principal people of the city called upon him a few "days before his death, and aſked him whether he "had any orders to give: he anſwered that he de-"ſired nothing more than that children might be al-"lowed

The evils children are expoſed to from too much application, are ſtill aggravated when that application is directed to ſtudies they have an averſion to; for even at any age, when we are obliged to fix our thoughts upon any diſpleaſing ſubject, the miſchief which wearineſs adds to thoſe produced by too much attention ſoon deſtroy the patient, who can only be relieved by applying to another ſubject. "I have ſeen, ſays M. "Boerhaave, perſons who had been con- "fined to ſtudies which were diſagreeable "to them, be brought as it were to life "again from applying themſelves (23) "to

"lowed to divert themſelves every year during the "month wherein he died. This was accordingly "executed; and the cuſtom prevailed ſtill in the "time of Diogenes Laertius."

(23) A recourſe to ſuch muſical airs as are moſt agreeable to the ear of a perſon fatigued with long and intenſe ſtudy, might prove recreating and uſeful, by exciting the action of different nerves, from thoſe which have been over-exerciſed by long thought and attention, and which muſt have need of reſt. I am acquainted with a ſedentary perſon, greatly addicted to reading, who aſſures me, that when he has found himſelf nearly ſtupified by attending to one book or ſubject, he has found his apprehenſion ſufficiently awake on recurring directly to a different one. Another gentleman of conſiderable application to various reading alſo informs me, that when he has read himſelf into a head-ach and a ſenſible obtuſeneſs of diſtinguiſhing, an immediate diverſion to elegant poetical works, or even to writing a little poetry, for which he is thought to have ſome talent, has entirely removed his head-ach, and proved as ſenſibly cordial to him, as he ſuppoſes muſic would

" to others more suitable to their inclinations (*s*).

§. 46. If too early an application to study is hurtful, it is no less dangerous to begin to apply too (24) late in life. Customs are formed only by degrees; there is a time of life when they are not contracted without difficulty. When a man is arrived to his full strength, without having been accustomed to literary occupations, it is to be feared that the fibres of the brain will not readily yield to the recent impressions this new kind of life will imprint; so that the motions of the nerves will probably be irregular, and a delirium will ensue. Instances of persons losing their senses, from giving themselves up to books at a time when they ought rather to think of lessening their attention to study, are not unfrequent. I have had here, not long since, a foreigner who left off trade at forty years of age, in order to cultivate the sciences, and who disordered his brain with reading Locke, Newton, Clarke, &c. He got entirely well by abstaining from reading, by diversions, agreeable conversations, exercise,

would have been to a person of a better musical ear than his own. These observations naturally remind me of that circumstance in the Pagan mythology, which ascribes the powers of medicine, of poetry, and of music, to the same heathen deity, Apollo. K.

(*s*) Prælect. ad Institut. §. 1056. t. 7. p. 346.

(24) This caution seems a very prudent qualification of M. Rousseau's extravagancies on this important point. K.

and medicines, but did not long continue ſo; for having reſumed his metaphyſical enquiries, he loſt his reaſon again. Since that time I have been called in to another patient, who being deſirous of becoming a geometrician and natural philoſopher at fifty years of age, was ſeized with a melancholy, which is real madneſs when at its height.

§ 47. A ſudden increaſe of buſineſs is alſo fatal. The only obſervation I have found in all M. Pujati's great work, is to this purpoſe: it is of a celebrated preacher, who being ſent by the head of his order to preach in a city where the audience was not eaſily ſatisfied, exerted himſelf ſo violently, that he brought on an incurable epileſy.

§ 48. It is even hazardous for men of letters, who are not young, to apply themſelves ſuddenly to ſciences different from thoſe they had been before exerciſed in. The new ideas they acquire muſt certainly put ſome new fibres of the brain in motion, which is therefore thrown into ſuch an agitation that the nervous ſyſtem is weakened. I knew a very learned divine, who deſtroyed his health entirely, by interrupting his uſual ſtudies in order to apply himſelf to Hebrew; and a reſpectable clergyman, who being promoted to a profeſſorſhip of divinity at fifty years of age, fell into a conſumption, which deprived him of life,

and

and was cauſed by his laborious endeavours to fulfil the duties of his new calling.

§ 49. If changing the object of ſtudy is prejudicial to perſons in the middle time of life, the continuation of the labours of the mind is no leſs hurtful to ſuch as are in an advanced age. Few men are born with ſuch a happy conſtitution as Gorgias of Leontium; who lived to the age of one hundred and eight years without diſcontinuing his ſtudies, and without any infirmity; or ſuch as his diſciple Iſocrates had, who wrote his Pan-Athenæai at the age of ninety-four, and who lived to that of ninety-eight years; or ſuch a conſtitution as that of one of the greateſt phyſicians in Europe, who although he has ſtudied very hard all his life-time, and that he is now almoſt ſeventy, wrote me word not long ſince, that he ſtill ſtudied generally fourteen hours every day, and yet enjoyed the moſt perfect health. Theſe inſtances, and ſome few more of the ſame nature, cannot be admitted as certain rules: it is ſtill true, that old age ſuffers, and is ſooner brought down to the grave by aſſiduous application. Our ſoul is certainly immortal; but while its union with the body ſubſiſts, it follows the ſame career, ſeems to be born, to advance, and to grow old with it (*t*). The diminution of bodily

(*t*) Gigni pariter cum corpore, & una creſcere ſentimus pariterque ſeneſcere mentem.

ſtrength

ſtrength warns us to leſſen the labours of the mind; the one cannot bear the ſame burdens, nor the other ſupport the ſame ſtudies, and the faculties decreaſe with the muſcular powers. Few old men are ſenſible of this truth; none can bear to be told of it; they are all like the archbiſhop of Grenada upon this article *(u)*, but it is not leſs certain: ſo that if thoſe perſons who know how to moderate their application as their age advances, prevent infirmities and inſure their health, thoſe who are prudent enough to know the time when they ought to lock up their productions, certainly inſure their reputation.

" Solve ſenescentem mature ſanus equum, ne
" Peccet ad extremum ridendus & ilia ducat." HORAT.

" I have ſeen, ſays the magiſtrate of Bruſſels before-quoted, the ſtrongeſt men " periſh when they juſt began to grow old, " by continuing to ſtudy as much as they " had done in the time of their greateſt " vigour. We ought to profit by their ex- " ample. Our time of life is calculated for " eaſe and proper leiſure; it is the time " for relaxation; let us curtail our labours " by degrees, and at laſt give them entirely " up. After having dedicated the greateſt

(*u*) Vid. Gil Blas. t. 3.

" part

" part of our lives to the public, let us " reſerve the latter part for ourſelves: this " conduct is pointed out to us by thoſe " ſtatutes, which at ſixty-five years of age " freed a ſenator from his functions, and " reſtored him to himſelf (*x*)."

§ 51. The diſeaſes I have here given a ſketch of, do not ariſe from ſtudy alone; immoderate application of the mind, of whatever kind, will produce the ſame; ſome examples of which have already been given.

Health is frequently deſtroyed by exceſſive devotion; M. Zimmerman has collected ſeveral intereſting obſervations on this head, in which devout melancholy is well delineated; its ſymptoms are very unaccountable, alarming, and grievous; and there are few practitioners who have not had opportunities of ſeeing ſome ſhocking inſtances of this diſeaſe. The greatneſs and excellence of the object, and the ſatisfaction the ſoul experiences in giving itſelf up to the contemplation of the Almighty, excites too lively a ſenſation, and produces in the brain a tenſion too violent and too continual, to be ſupported for a long time together without injury; it ſoon throws the ſoul into fanatical madneſs, and exhauſts the body. I have ſeen the moſt amiable young perſons, led away by an erroneous ſyſtem, fade and fall into decay, ne-

(*x*) Epiſtol. Plempio.

glecting

glecting the duties of their calling, in order to give their thoughts up wholly to the Supreme Author of their being, who could not have been more properly glorified than by a ſtrict attention to thoſe duties. You ſtill regret one of your ſtudents, Gentlemen, a man of the greateſt abilities, born with ſtrong powers of the mind, whoſe candour and other virtues would have been an acquiſition to the church; but who unfortunately devoted himſelf to a ſect, of which he ſoon was the victim, the powers of his body decaying as faſt as his mind became more zealouſly inflamed.

§ 51. The employments of majeſty, of adminiſtration, of judicature, deep ſpeculations of all kinds, and in ſhort every thing which exerciſes the faculties of the ſoul too powerfully and for too long a time, will produce the ſame diſorders as the cultivation of the moſt abſtruſe ſciences. Kings, ſenators, miniſters, embaſſadors, projectors, will ſuffer in the ſame manner as men of letters do, if they dedicate as much time, and apply as intenſely to their affairs as the learned do to their ſtudies. They have indeed this advantage, the importance of which I have before indicated, that even the duties of their office often divert their attention, and oblige them to uſe exerciſe, an advantage the mere ſtudent is deprived of: but again, their labours are often attended with uneaſineſs and vexation of mind,

mind, the conſequences of which are ſtill more grievous than thoſe of inaction, and are equally oppreſſive to the ſoul and body; ſo that I am much amazed when I ſee perſons bear up amidſt the buſineſs of great undertakings, and the ſolicitude inſeparable from them. Cæſar, Mahomet, Cromwell, and Paoli, greater perhaps than either, muſt certainly have been ſupplied with powers more than human; notwithſtanding which, they would ſtill have ſunk, if not ſupported by the aſſiſtances of temperance and exerciſe. But I have ſufficiently treated of the diſeaſes, and ſhall now conſider the moſt proper methods of relieving them.

§ 52. The firſt difficulty to be overcome in reſtoring the health of men of letters, is to convince them they are in the wrong. They are like lovers, who grow angry whenever any fault is found with the object of their affection; beſides, the learned have generally a kind of ſteadineſs in their ideas, contracted by ſtudy and increaſed by ſelf-opinion, too often the effect of knowledge, which prevents them from being eaſily perſuaded of the hurtful tendency of their conduct. Warnings, arguments, intreaties, chidings, are often uſed in vain; they find out a thouſand ways of deceiving themſelves; one depends upon the ſtrength of his conſtitution; another pleads the force of cuſtom; a third flatters himſelf he

ſhall

ſhall ſtill eſcape, becauſe he has never yet ſuffered; a fourth encourages himſelf with examples which prove nothing in his favour; all of them reſiſt the phyſician's advice with an obſtinacy miſtaken by them for reſolution, which they think commendable, and therefore become the victims of it. Far from being ſenſible of approaching danger, they ſometimes cannot be perſuaded that they are ill; or rather, they think a ceſſation from ſtudy is the greateſt injury they can ſuffer, and reckon others for nothing, provided they can ſcreen themſelves from that. When the oppoſite extreme prevails, and that they are attacked with ſuch mobility of the nerves as makes them fear even the moſt imaginary evils, they are not leſs difficult to be dealt with. Want of courage does not always make them tractable; on the contrary, an irreſolution worſe than obſtinacy takes place; ſo that it can hardly be expected they will ſubmit to the confinement of a regular treatment. It may indeed be affirmed in general, that learned men are the moſt ungovernable patients; which is an additional reaſon for giving them an inſight into the means of preſerving and reſtoring their health.

§ 53. The relaxation of the mind is the firſt preſervative; without this, all other helps are inefficacious. I know there has been a ſmall number of men of ſuperior talents, to whom it would have been preſumption

ſumption to have given this advice: it would have been a kind of ſin to have taken them away from their ſtudies. Deſcartes, abſorbed in the moſt ſublime meditations, and marking out to mankind the path of truth; Newton, diſcovering and laying open the laws of nature; Monteſquieu, compoſing a code for all nations and all ages, are certainly to be reſpected in their occupations: they were born for arduous undertakings, and the public requires great things of them. But how few are there whoſe labours are of ſo much conſequence to mankind? The greater part of the learned waſte their time and their health in very unprofitable ſtudies. One is a compiler of the moſt common things; another ſays what has been often ſaid before; a third is employed in uſeleſs diſquiſitions; a fourth deſtroys himſelf by giving up his time to compoſitions of a light and trifling nature; a fifth, in tedious and prolix writings: neither do any of them think of the hurt they do themſelves, and the little advantage the public will reap from it. The greater number indeed never concern themſelves about the public, but rather devour ſtudy as gluttons cram down food, merely to glut their appetites; by which they alſo neglect many eſſential duties. The only way, therefore, is to be reſolute with them, to force them away from their cloſets, and oblige them to indulge in

recreation

recreation and reſt, which will remove their diſorders and reſtore their health. Beſides, the time they paſs out of their cloſets is not thrown away; they return to their labours with freſh eagerneſs; and a few moments given up every day to leiſure, will be amply repaid by the enjoyment of health, which will prolong the courſe of their ſtudies. Sometimes even the moſt lucky thoughts ariſe in the midſt of recreation (*y*). One of the greateſt geniuſes of our age compoſed his immortal works walking about in the country (*z*). The ſoul unfolds itſelf in open air, but is impriſoned within the confined walls of a ſtudy; it is elevated by the fragrance of rural flowers, depreſſed by the ſmell of a lamp. Plutarch's compariſon on this ſubject is very juſt and excellent: "A "little water, ſays he, nouriſhes and "ſtrengthens plants; a greater quantity "ſtifles them." Thus it is with the mind; moderate labour is its food; exceſſive labour deſtroys it (*a*). It is, perhaps, more neceſſary to prevent this diſeaſe than any other: diſorders ſeated in the brain ſcarce admit of a radical cure; it recovers its powers with more difficulty than other or-

(*y*) Vegeta & ſtrenua ingenia, quo plus receſſus ſumunt hoc meliores impetus edunt. Valer. Maxim. lib 3. cap. 6. p. 140.

(*z*) Animus eorum, qui in aperto aere ambulant, attollitur. Plin. jun.

(*a*) De Education. Pueror. cap. 12.

gans;

gans. The more uſeful the brain is to men of letters, the more ought they to take care of it; and I ſhould think the inſtances we have of perſons becoming idiots from too intenſe application, ſufficient to open the eyes of the learned, and teach them moderation. Let them therefore no longer perſiſt in attempting to juſtify ſuch dangerous practices, and in ſporting with their own health; let them not alledge the examples of others, the trial is too hazardous; let them not avail themſelves of the ſtrength of their conſtitution, ſince they are every day impairing it; let them not depend upon the effects of cuſtom, ſince that only makes the action of the noxious cauſes imperceptible, without deſtroying it; let not the happy circumſtance of having hitherto eſcaped, make them careleſs of the impending danger; and laſtly, let them be convinced, that we cannot with impunity give ourſelves up to exceſſive application; and that in order to cultivate the ſciences without prejudice to our health, it is neceſſary to interrupt the courſe of our ſtudies frequently.

§ 54. When inactivity was mentioned as the ſecond cauſe of the diſorders here treated of, exerciſe was certainly repreſented at the ſame time, as one of the moſt powerful preſervatives and reſtorers of the health of the learned. In the foregoing article the

advantages of open air have been conſidered: theſe are greatly enhanced, if accompanied with ſome degree of motion. From the combination of theſe two ſalutary powers, we receive refreſhment, circulation is carried on with eaſe, perſpiration encouraged, the action of the nerves reanimated, and the limbs are ſtrengthened. Every man who has been confined to his ſtudy for ſome days, feels his head heavy, his eyes inflamed, his lips and mouth dry; he complains of a certain uneaſineſs about his breaſt, a ſlight tenſion at the pit of his ſtomach, is more diſpoſed to melancholy than mirth, his ſleep is leſs refreſhing, and his limbs are weighty and benumbed. If he ſtill perſiſts in ſhutting himſelf up, all the ſymptoms increaſe, and lay the foundation of the miſchiefs I have deſcribed. A walk for two or three hours in the country diſpels them entirely, and brings back ſerenity, freſhneſs, and ſtrength. The learned in general are not ſufficiently convinced of the influence the body has on the ſoul, although it was well known to our greateſt men (*b*), who have been ſenſible that the mind was ſubject to the powers of phyſic as well as the body. "The ſoul, ſays "Deſ-

(*b*) There is a very remarkable paſſage on this ſubject in Moſes Maimonides, the moſt antient of the Arabian phyſicians: "Since health, ſays he, aſſiſts "us

" Deſcartes, is ſo much influenced by the
" conſtitution and the ſtate of the bodily
" organs, that if it were poſſible to find
" out a method of increaſing our penetra-
" tion, it ſhould certainly be ſought for
" in medicine (*c*)." This conjecture of Deſcartes has been verified by M. Hoffman. This famous practitioner expreſsly declares, that he has known ſome ſtupid perſons acquire judgment from being put a little into motion (*d*). All men of letters ought firmly to reſolve to give up at leaſt two hours every day to exerciſe; and Mr. Boerhaave is of opinion it ſhould be taken before dinner. Walking alone is very beneficial, but not quite ſufficient; and it cannot be too much recommended to them to ride out frequently (25) on horſeback: this kind of exerciſe is of great uſe to the head,

" us much in the knowledge and worſhipping of the
" Divinity, and that the ſick man cannot properly
" contemplate his works, it becomes therefore abſo-
" lutely neceſſary to avoid with care whatever may be
" hurtful to the body, and on the contrary to ſeek
" after every thing which may preſerve or improve
" health."

(*c*) De methodo, n°. 6.

(*d*) De motu optim. corpor. medicin. § 9.

(25) This is certainly the moſt preferable exerciſe for perſons who have impaired their health, and enervated their conſtitutions, for want of any: and probably a good moderate trot, that might not tire the rider too ſoon at firſt, is better than an eaſy pace, and certainly much preferable to the motion of a very eaſy vehicle over a ſmooth road. That mode of exerciſe

head, the breaſt, and the viſcera of the lower belly eſpecially by preventing or diſpelling their obſtructions, which have been mentioned among the diſeaſes common to ſedentary perſons. I ſhould even wiſh that the preſent age and poſterity might be indebted to our learned for the reſtoration of thoſe various exerciſes which the ancients made a part of their duty, which our anceſtors were ſtill expert in, and which have been ſo much neglected for the two or three laſt generations, that in all probability in a few years hence their very names will not be found but in dictionaries. Hiſtory, which men of letters are certainly well acquainted with, abounds with inſtances of the good effects of exerciſe. Herodicus, a famous phyſician, the maſter of Hippocrates, who firſt introduced the medicina gymnaſtica, reſtored his own health by this means, and lived to the age of one hundred years, notwithſtanding the weakneſs of his conſtitution: he might perhaps be too free in preſcrib-

which is but juſt perceivable by the patient, will be only proportionably felt by his ſluggiſh circulation, and relaxed ſyſtem. In ſhort, it is not giving him the neceſſary and availing doſe of exerciſe. Beſides, for thoſe who have injured their health, and perhaps their faculties too, by inceſſant reading, a very ſalutary prohibition of that habit ariſes from their active progreſs on a good horſe, which the ſmoother motion and indolent poſture in a carriage may not ſo certainly prevent. **K.**

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ing it to his patients, but we are all apt to be too zealous in favour of uſeful diſcoveries, becauſe we know not at firſt how to determine their benefits and diſadvantages (*e*). Strabo being ſeized with a diſorder of the ſpleen, one of thoſe incident to the learned, cured himſelf only by exerciſe (*f*). In the ſame manner Hiſmonæus got the better of a weakneſs of the nerves. Galen, who was ſickly 'till he was more than thirty years old, tells us himſelf, that he could not recover his health any other way than by giving up ſome hours every day to exerciſe. Socrates (*g*) and Ageſilaus riding acroſs a ſtick with their children; the great pontiff Scævola, Scipio, and Lælius playing at chuck, and making ducks and drakes by the ſea-ſide to reſt them from their labours, and to preſerve their health, ſpirits, and ſtrength; appear to me as examples worthy to be propoſed, without offence, to the moſt learned amongſt us, for their imitation; and it is probable they will not diſdain to follow them. "It is ſurpriſing, "ſays Pliny the younger, that the powers

(*e*) Herodicus was brother to the famous rhetorician Gorgias of Leontium, who lived to the age of one hundred and ſeven years, and certainly followed the advice of his brother.

(*f*) There are ſome princes and many great men of this name. This one is Strato of Lampſacus, ſurnamed the Natural Philoſopher.

(*g*) Arundine equitavit ipſe Socrates. Valer. Maxim. l. 8. c. 8.

" of the mind ſhould be ſo much quickened " by motion and bodily exerciſe."

Sailing is an exerciſe which cannot be recommended to the learned, becauſe it is not within the reach of the greateſt part of them; but it may be conſidered as a powerful remedy for removing obſtructions in the viſcera, diſſipating the bile, reſtoring perſpiration, encouraging all the evacuations, and which therefore ſhould not be neglected by thoſe who have an opportunity of uſing it. Its advantages were well known to the antients (*b*), and it is the kind of carriage preferred to all others by Octavius Auguſtus, who was himſelf a man of letters, and ſubject to their infirmities (*i*). " He applied himſelf early, ſays his hiſ- " torian, and with eagerneſs, to eloquence " and the fine arts: he was afflicted with " heavy diſorders, was ſubject to rheums " and defluxions, and was troubled with " the ſtone and inflammations of his " bowels (*k*)." But although he ſuffered the inconveniencies which knowledge brings along with it, yet he was more prudent than the learned generally are; for he knew how to attend properly to his health, and

(*b*) M. Gilchriſt, a celebrated Scotch phyſician, has ſhewn the good effects of navigation, in many grievous diſorders, by a collection of obſervations in a ſmall work, On Sea Voyages.

(*i*) Si quo mari pervenire poſſet potius navigabat. Sueton.

(*k*) In vit. Oct. Aug. cap. 82.

thereby

thereby preſerved himſelf to a good old age.

Riding in a coach well hung, and on an even road, can hardly be called exerciſe, any more than the motion given to ſick people, in different machines contrived for that purpoſe, when they are not in a condition to go out. But theſe are feeble reſources we never have recourſe to while more effectual helps can be had; and men of letters have it always in their power to uſe better exerciſe, if they do not begin too late.

The exerciſes moſt ſuitable for men of letters are ſuch as put the whole body in motion; theſe are, tennis, the ſhuttle-cock, billiards, the mall, hunting, ſkittles, bowling, and even chuck; but theſe are unfortunately in ſuch diſcredit in many parts, that perſons who are tender of their good name would almoſt be aſhamed to be ſeen playing at them, and will not be convinced that the neglect of theſe uſeful amuſements, is one of the principal cauſes contributing to the increaſe of their diſorders. It is much to be wiſhed, that the uſe of theſe exerciſes ſhould be reſtored, in the many academies which are now eſtabliſhed for the education of youth, and that the gymnaſtic art ſhould become, as it was formerly, a part of the maſter's care, as well as the diverſion of the young people: under this general term I comprehend young ladies alſo,

whoſe ſedentary life often diſturbs their health, and I may even venture to ſay, the happineſs of ſociety.

§ 55. Learned men, earneſt in the defence of their inactivity, will perhaps avail themſelves of the inſtances of a few perſons, who have preſerved their health to a very advanced age without taking exerciſe; or may plead, however improperly, as we have juſt now ſeen, the inactive lives of the fair ſex, as well as of ſeveral artiſts, whoſe occupations are ſedentary, in their behalf; but they unfortunately deceive themſelves, and will find that the inſtances they alledge are not ſimilar to their own ſituations.

If indeed there are ſome women (for this cannot by any means be ſaid of the greater part of them) who enjoy a tolerable ſtate of health without taking exerciſe, it is becauſe they have other methods of promoting the circulation, of which the learned are deprived. Nature has made them more ſuſceptible of agreeable impreſſions, and has ſupplied them with a greater fund of chearfulneſs; they talk more, and converſation is itſelf a kind of exerciſe ſuited to them; they generally eat leſs; they do not exhauſt themſelves with deep thinking, ſo fatal to the learned; their ſleep is not broken by the involuntary continuation during the night of any ideas the mind has been ſtrongly impreſſed with in the day-time:

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a thouſand little incidents of ſociety, which a man abſorbed in ſtudy does not even perceive, are for them important enough to intereſt their paſſions to a degree ſufficient to quicken the circulation without fatiguing the organs. If ſome men of the world grow old, and preſerve their health, notwithſtanding the inactivity of their lives, it will generally be found, on examination, that they have had ſome of the ſame advantages as have been proved to be common to women.

Neither ſhould men of letters deceive themſelves with the examples of ſedentary artiſts, for their occupations are of a very different nature; they have but one inconvenience common between them, which is, the want of neceſſary motion: but even this inconvenience they are far from being equally expoſed to; for the man of letters is conſtantly ſitting every day; whereas the artiſt corrects the bad effects of the ſedentary life he leads while at work, by the exerciſe he indulges in on Sundays and holidays: this in one part of Europe takes up rather more than a ſeventh part of the year, and in the reſt more than a ſixth. In every inſtance the difference between them is conſiderable; for although the artiſt may not ſtir from his ſeat, ſome part of his body is however always in motion; and in ſome works of art, this motion is ſufficient to make them very laborious and fatiguing,

notwithſtanding the workman is always ſitting; in all of them the continuation makes ſome amends for the inconſiderableneſs of it; ſo that the ſummary of their motion at the day's end, although by no means ſufficient for health among ſeveral of them, yet amounts to more than what many of the learned uſe. Beſides, if the artiſt does not uſe the exerciſe neceſſary for quickening the action of the nerves, he does not at leaſt conſume it by ſtudy; his labour procures him ſleep, while that of the learned deprives them of it; his digeſtions are not diſturbed by thinking after meals; his method of life is more ſimple; his chearfulneſs, and ſinging at his work, ſupports him; in ſhort, in every particular the man of letters has the diſadvantage (*l*).

§ 56. However beneficial action may be, it is ſtill neceſſary to uſe it with prudence, leſt it ſhould become hurtful. The

(*l*) I do not pretend to ſay that inactivity is not hurtful to many artiſts. I know that all the arts have their inconveniencies, and perhaps the huſbandman's life is the only one which is not contrary to health; but I only mean to ſhew, that the inactivity of the learned is greater, and attended with more hurtful circumſtances, than that of ſedentary artiſts. The diſeaſes of this claſs of men ariſe from four principal cauſes; the want of ſufficient exerciſe and open air; the places they live in, which are oftentimes unwholſome; the ſubſtances they work upon, or uſe in their work; the wearineſs of particular parts of the body, on which the laborious part of their buſineſs is exerted.

firſt

firſt thing to be attended to, is the avoiding of immoderate exerciſe, which is far from doing good, but rather exhauſts than reſtores the ſtrength. The learned, who are apt to give into extremes, paſs on ſometimes from a compleat ſtate of inaction to the moſt active life they can chuſe, imagining that a few days of hard exerciſe will compenſate for their having been a long time without any: but they are much miſtaken; for they not only waſte their ſtrength by theſe means, and find themſelves more exhauſted afterwards, but alſo their veſſels being weak, and not able to reſiſt a too ſudden increaſe of motion, are in danger of being ruptured; from whence, bleedings of the noſe, ſpitting, and even vomitings of blood, which I have ſometimes ſeen. It is with reaſon therefore that Seneca, in treating of the exerciſes proper for men of letters, forbids ſuch as exhauſt the ſpirits (*m*); and Homobo Piſo, the Italian phyſician, who in our days wrote againſt the circulation, was of opinion, that a man who wearied his body with labour, was unfit to give a proper attention to buſineſs (*n*).

A ſecond precaution to be obſerved, is not to apply immediately after having taken exerciſe, and that for two reaſons: the firſt

(*m*) "Nam exercitationes, quarum labor ſpiritus "exhaurit, hominem inhabilem intentioni ac ſtudiis "acrioribus reddit." Epiſt. 15.

(*n*) De Regimine Magnor. Auxilior. p. 378.

is, that reſt is neceſſary for us at ſuch a time, and that the action of the mind is not relaxation for the body when fatigued, as that of the body is for the weary mind: the ſecond is, that the circulation is quickened by exerciſe; and the brain itſelf being agitated by this increaſe of motion, is hardly in a proper ſtate for admitting a ſeries of ideas, the clearneſs of which depends upon the oſcillations being undiſturbed and regular (*o*).

There is certainly no man of letters, who has ever found himſelf under the neceſſity of applying after having taken exerciſe ſufficient to ruffle his pulſe, and who has not at the ſame time felt a kind of unſteadineſs in his head, and that a number of ideas crowded in upon him without the neceſſary preciſion.

In the third place, it is of great conſequence to abſtain from violent exerciſe immediately after a meal; digeſtion is not brought about either by fermentation, diſſolution, or trituration ſeparately, but rather by the combination of theſe three powers; and it is a proceſs which requires tranquillity. It ſtands in need of the nervous influence, as we have before obſerved, and is therefore diſturbed, if that is other-

(*o*) Vid. Platneri de Negotioſa Actione propter Valetudinem circumcidenda. This excellent Diſſertation, full of uſeful remarks, and written with great elegance, is a very valuable piece for all phyſicians.

wiſe

wiſe taken up by hard exerciſe. The food is not to be inceſſantly toſſed about in the ſtomach, becauſe the action of digeſtion already begun would be diſturbed at every inſtant by this motion: and for this reaſon the trotting of a horſe hinders digeſtion more than any other exerciſe that can be taken after dinner.

It may be ſtill proper to obſerve, that all exerciſe will at firſt prove troubleſome after long diſuſe, and will perhaps appear to do more hurt than good; but we are not to be diſcouraged by theſe inconveniencies; ſince they may be in great meaſure avoided by ſetting out with moderation, and going on gradually till we ſhall at laſt find ourſelves enabled to take a great deal of exerciſe without fatigue, and with the moſt evident benefit.

§ 57. When men of letters can be prevailed upon to relax their minds and take more exerciſe, they will generally eſcape the diſorders they are expoſed to; but as it is not to be expected that they will all follow the advice given to them on this head, it becomes alſo neceſſary to regulate their diet in ſuch a manner at leaſt, that their food may not increaſe the cauſes of their infirmities, but rather if poſſible contribute to leſſen them (*p*). In Hippocrates we find a general

(*p*) "Vero é, che un letterato indefeſſo ne' ſtudi "ſe uſi un vitto regolato, innocente, e parco provare "più

general rule for the learned as well as for all other individuals, reſpecting the quantity of food neceſſary: "Let nouriſhment "(ſays he) be proportioned to labour (*q*):" for, as he mentions elſewhere, "if the "powers of the body exceed the force of "the aliment," (that is, if we digeſt well) "it nouriſhes and gives ſtrength to the "body; but if the ſtrength of the ali-"ment is greater than the power of the ſto-"mach," (or, in other words, if the ſtomach cannot digeſt it), "a number of in-"conveniencies ariſe (*r*)" Plutarch inſiſts much upon this reciprocal proportion between the degree of exerciſe and the quantity of food requiſite for the preſervation of health; and we ſhall be convinced of its importance, if we call to mind what I have before proved, that it is the action of the different organs which extracts from the food juices ſimilar to our humours, and changes them to our own proper ſubſtance. If theſe organs, the chief of which is the ſtomach, are too weak to act upon a great quantity of food, or ſuch as is difficult of digeſtion, the food then, inſtead of being aſſimilated or converted into our ſubſtance, becomes putrid, and, as I have before obſerved, § 20, degenerates into that kind of

"piu ſoffribili gl'incommodi di ſua profeſſione." Fe-lici Diſſertat. p. 203.

(*q*) Ὡς ὁ πονος ἐστι καὶ ἡ τροφη.

(*r*) De Locis in Homine, p. 421. and in other places.

putre-

putrefaction peculiar to its nature, and remains in the ſtomach an extraneous body, which irritates and affords no nouriſhment. The powers of theſe organs are therefore to be attended to; and among the learned there are ſo many circumſtances tending to impair them, that they cannot expect to preſerve them long: beſides, even when their digeſtions are well performed, they ſhould conſider that they perſpire but little, and for that reaſon abſtinence is of conſequence to them, to prevent the miſchiefs mentioned in § 23, p. 54. Let them compare themſelves to the robuſt ploughman, and judge whether they can bear the ſame kind of diet. The one is always in the open air, always in exerciſe, always chearful, and never fatigues himſelf with thinking: his ſleep being calm and regular, and his ſecretions well performed, he is always in perfect health: the hardeſt kind of food is not too difficult for his ſtomach, becauſe he has all the properties neceſſary to digeſt it; his teeth being good, he begins by chewing it well; whereas moſt learned men ſwallow their victuals without chewing. In the ploughman, the ſaliva, the digeſting fluids of the ſtomach, the pancreatic juice, the bile, the inteſtinal juices, are all in a higher ſtate of perfection, becauſe the organs which ſecrete them are ſound; the muſcular fibres of the ſtomach and bowels act with force: in ſhort, none of the offices

are

are languidly performed, the excrements are properly expelled, the chyle is conveyed without interruption into the blood-veſſels, in which it is ſoon changed into good blood, the ſuperfluous parts of which are carried off by urine and perſpiration, and the body is preſerved in a perfect equilibrium.

If light broths, niceties, jellies, chicken, or white bread, are given to a hard-working man, he will have digeſted them in a very little time; he will ſoon grow hungry, be in a general ſweat, and faint away, unleſs quickly ſupplied with bacon, ſmoke-dried meat, cheeſe, or brown bread. If a man of a tender conſtitution attempts to live upon ſuch food, he will be ſeized with violent pains in the ſtomach, or with anxieties more troubleſome than pain; he will have powerful indigeſtions, and the aliments putrefying, will become a kind of poiſon, productive of the moſt fatal conſequences. The learned have been appriſed of this danger by M. Boerhaave: "There are ſome men "of letters, ſays he, of greedy appetites, "who venture to live upon the ſame food "as the country people do, but they cannot digeſt it; they will find themſelves "obliged to give up their ſtudies or change "their diet; or elſe tedious and painful "obſtructions in the bowels will be the effects of their indiſcretion (*s*).

(*s*) Prælect. ad Inſtit. § 1036. t. 7. p. 337.

§ 58. The

§ 58. The learned ought to attend to the quantity as well as the quality of their food; errors in each of theſe circumſtances are of bad conſequence; but I may venture to aſſert, that if we muſt give into either of theſe errors, it may be leſs hazardous to chuſe food of an (26) improper kind (which indeed we may be ſometimes obliged to do), than to indulge in eating too much, which never can be neceſſary.

It is not my intention to give an exact liſt of all aliments which may be injurious or uſeful: I ſhall only ſpecify the general claſſes of ſuch as are to be avoided, and ſuch as may be indulged in.

Thoſe which are improper are, in the firſt place, all kinds of greaſy aliments: they increaſe the relaxation of the fibres of the ſtomach, blunt the action of the ſaliva of the juices inſervient to digeſtion, of the bile, of the juices of the inteſtines, the

(26) Should they be reduced to put up with food they have found to diſagree with them, although in a moderate quantity, they ought certainly to reſtrain themſelves more, than they will need to do on proper food. They muſt be in an unhappy ſituation indeed, if they have not even bread, or ſome innocent well-boiled vegetable, to add a little more to their limited meal. Suppoſing appetite to remain in valetudinarians, they may be apt to retain an inclination for ſuch food as they liked in youth. But if their digeſtion is impaired by age, by inaction, or by aſſiduous ſtudy, a little obſervation will convince them, they cannot indulge on the harder meats, or on high ſauces, with impunity. K.

properties

properties of all which are already too much weakened: by the tedioufneſs of their digeſtion, they cauſe an uneaſy weight on the ſtomach, and degenerating into putrefaction, become at firſt acid, then rancid, and produce the ſymptoms of violent irritation in theſe parts.

2dly, All food of a viſcous, gluiſh, or ſlimy nature, acts nearly in the ſame manner as the greaſy aliments. Theſe two claſſes comprehend all fat paſtry, all things that are fried, fritters, creams, the feet of animals, &c.

3dly, We may reckon among the improper aliments all ſuch as contain a great quantity of air, which expanding itſelf, and not being ſufficiently confined, by weak organs, nor diſperſed in proportion as it expands, produces conſiderable ſwellings, always attended with a ſenſation of uneaſineſs throughout the whole body, and eſpecially of confuſion in the head, which diſturbs its functions. This kind of property made the antients forbid the uſe of all vegetable ſeeds, and induced Pythagoras, who in other reſpects recommended a vegetable diet, to lay a particular injunction upon his ſcholars not to eat beans (*t*).

4thly,

(*t*) The air let looſe from the aliment is one of the chief agents in digeſtion; we could not live long upon food from which the air had been expreſſed: but this air ſo uſeful and ſo neceſſary when the organs are in a ſound

4thly, Meats naturally tough, or hardened by ſmoke and ſalt, are to be avoided; for the digeſtive powers act too ſlowly upon ſuch ſubſtances; they ſtay a great while in the ſtomach; produce, firſt, irritations by their weight and acrimony; become putrid by remaining ſo long in the ſame place; and this putreſcency afterwards increaſes the irritation.

5thly, Men of letters muſt abſtain from food which is very (27) ſour; for we have ſeen

found ſtate, becauſe at that time a leſs quantity is ſet free, becauſe the expanſion of it is gradual, becauſe it is governed and employed again as the expanſion takes place by the action of the ſtomach and inteſtines, becomes hurtful when the digeſting powers are weakened; becauſe, as we have already ſeen, the aliments putrefying ſooner than they are digeſted, a much greater quantity of air is ſet free; becauſe the food gets forward but ſlowly, and remains a long time in the ſtomach: this organ, therefore, becomes loaded with a body of air, which ſhould have been diſtributed throughout the whole inteſtinal canal; becauſe, laſtly, this air being more powerful than the organs containing it, if I may venture to uſe this expreſſion, is not governed by them; but being collected and rarefied every moment by the heat, its bulk is prodigiouſly enlarged, ſo that ſharp pains are brought on, digeſtion is interrupted, the viſcera of the abdomen are compreſſed, their functions diſturbed, and ſometimes inflammations are brought on.

(27) This is ſure to prove generally true, though oppoſite conſtitutions will now and then make a notable difference. I know a gentleman of above ſixty, of a good conſtitution, who indulges greatly in vinegar, lemon-juice, &c. without the leaſt complaint. He has a general averſion to ſhell-fiſh. While I lived in

ſeen that they are much ſubject to acidities in the ſtomach; as alſo from any nouriſhment irritating too much, from any other kind of acrimony which may be hurtful to their delicate and irritable nerves.

§ 59. The moſt ſuitable kind of food is, in the firſt place, the tender fleſh of ſuch young animals as are generally ſerved up at tables, except that of pork, geeſe, or ducks. 2dly, All ſhell-fiſh which is firm and tender, either from the ſea, rivers, or ſtanding waters. 3dly, The grains of corn, ſuch as the different kinds of wheat, rye, barley,

a latitude twenty degrees ſouth of London, and was in the ſpring and ſummer of life, the juices of limes, lemons, ſour oranges, agreed pretty well with me in a conſiderable quantity. But when I altered my climate, and was turned of fifty, full ſixteen years paſt, I ſoon found acid punch, eſpecially in winter, diſagree with me; and ſtill more ſo, ſince I have had the gout, for nearly the ſame term. The marine acid, in a very liberal meaſure, has agreed with me as long as I can remember; but meats hardened with it, I venture only ſeldom to eat. Sir John Colepepper pretended to cure the gout, that frequent attendant on ſtudious ſedentary perſons, ſolely by acids; and ſome people even now cry up ſour punch in it. I am convinced none of them would even palliate mine. But the gentleman I firſt referred to here, who is medical, is ſtrongly of opinion, that acids preſerve his health, which is vegete for his age. He has not macerated himſelf by ſtudy, but has undergone long and conſiderable fatigues by ſea. Sea voyages, however, where people can be kept dry, are, I believe, the greateſt increaſers of inſenſible perſpiration. I have taken the liberty to introduce this note here, from the circumſtance of many literary perſons being arthritic. K.

rice,

rice, oats: we muſt not even think that all the ſeeds of vegetables are hurtful: although they contain more (28) air than the others, I have never obſerved that a moderate uſe of them was injurious to perſons whoſe ſtomach was not quite deſtroyed. Some of theſe ſeeds, when boiled, compoſe the different ſoups commonly known under the name of farinaceous broths, which, whether they are made with water alone, or with the addition of meat, according to the circumſtances, are a very nutritious kind of food, eaſy of digeſtion, and which may be uſed with great ſucceſs in many caſes. The wheat and the rye make the bread, of which I ſhall ſpeak preſently. 4thly, All herbs which are not too relaxing or too acid, are to be reckoned among the aliments proper for ſtudious men; the different ſpecies of endive are the moſt wholſome among theſe. 5thly, We may reckon alſo moſt of the common roots, the nutritious parts of which conſiſt in their farinaceous ſubſtance, as in the ſeeds; beſides that moſt of them are impregnated with a very ſweet juice, which being a mixture of oil and ſalt, is

(28) Young green peas well boiled, which young ones ſoon are, cannot be very exceptionable. Beſides, conſiderable regard is to be had to ſuch vegetables, in their due ſeaſon, as have always agreed with individuals in former times, and have not been found hurtful in any later inſtances. K.

very

very ſalutary (*u*). 6thly, Bread, the common nouriſhment of all civilized nations, and of which ſome equivalent ſubſtitute is to be found in uſe among the generality of mankind, muſt not be omitted here. 7thly, Eggs. 8thly, Milk. 9thly, The fruits are to be conſidered as proper food. But the uſe even of theſe aliments may be made ſtill more beneficial, by attending to ſome obſervations very neceſſary to be made.

§ 60. With regard to the tender meats, we muſt eat them roaſted or boiled in a very ſmall quantity of water: if they are boiled in a large quantity, the water becomes impregnated with all the nutritious particles, and nothing remains but a dry fibre, which cannot ſupply any nouriſhment. Beef which is tender, good veal, mutton fed in dry places, fowls, chickens, capons, and pullets, if not overloaded with fat; turkeys, young pigeons, partridges, and larks, are the moſt proper meats for perſons of delicate ſtomachs; and perhaps they ought to confine themſelves to ſuch ſort of food.

Fiſh without ſhells, fiſh from ponds, or thoſe which are too fat, flabby, or ſlimy, and make it become putrid. It ought to

(*u*) All the culinary roots, and undoubtedly many others, are full of an excellent kind of ſugar, not inferior to that of the ſugar-cane, and which may eaſily be extracted from them; eight ounces of the juice of ſkirret yield one ounce and a half of ſugar. Margraff. Mem. de L'Acad. de Berlin.

be

are to be avoided as pernicious; and in general, the moſt wholſome way of dreſſing fiſh, is boiling it in water.

New-laid eggs, either raw or boiled a little in the ſhell, are a kind of food ſoft, not inflammatory, and of eaſy digeſtion; but they become hurtful, when not exceedingly freſh, and if boiled hard, are not to be digeſted without much difficulty; otherwiſe they are very proper for perſons ſubject to acidities; and thoſe who cannot bear them whole may find it very uſeful to eat the white of the egg only, which is more readily digeſted, and very ſtrengthening (*).

Milk, the mildeſt and moſt digeſtible of all aliments, is alſo very proper for men of letters, if they are not troubled with acidities, or if they do not mix it with other food which might alter its properties, or with ſubſtances of difficult digeſtion, which might retain it a long time in the ſtomach,

(*) If we were not ſatisfied of this fact from experience, it might have been concluded from the circumſtance of the white being the firſt nouriſhment of the chicken, and that the yolk only becomes uſeful to it in the laſt days of its confinement. And if the accounts of ſome travellers may be credited, the yolk of the Tavon's egg, a kind of ſea-hen in the Philippine Iſlands, never ſerves for the nouriſhment of the little animal; ſo that when he is hatched, the yolk is found entire in the ſhell. But how are we to reconcile this obſervation with others, which prove inconteſtably that the yolk is itſelf a part of the animal?

be taken alone, or with a little bread, after the digeſtion of other aliments is compleated.

Chocolate may be mentioned next after milk, and is rather to be reckoned among the aliments than the drinks: it is the decoction of a ſeed compoſed of two parts; a ſoft, nouriſhing, digeſtible kind of meal, and a greaſy, bitter, ſharp oil: this mixture makes it a ſpeedy reſtorative and ſtrengthener; but it muſt not be uſed too freely. The cocoa-nut is too nouriſhing for plethoric perſons; it increaſes the quantity of blood and heats them; being greaſy, it ſometimes lies heavy on the ſtomach, does not digeſt well, takes away the appetite, makes the body coſtive, and is generally improper when there are any obſtructions: at other times it turns ſour. The addition of ſugar makes it more eaſy of digeſtion; but aromatics, eſpecially the vanilla and amber*, make it unbearable to ſeveral people, and injurious to all inflammatory conſtitutions, who are much inclined to have blood derived to the head.

§ 61. The fruits moſt in uſe are cherries, ſtrawberries, raſberries, currants, gooſeberries, mulberries, the different ſorts of plums and (29) peaches, melting pears, apricots and

* This is tranſlated ſtrictly from the French de l'ambre: but it is probably rather a typographical erratum for de l'ambergris, ambergreaſe.

(29) In our hot and dry ſummers, (which have not occurred here for ſeveral ſucceſſive years) peaches ripen

and grapes. They are not all equally wholeſome: cherries, mulberries, peaches, melting pears, and grapes, ſeem to be beſt. Their relaxing property, and being likely to turn ſour, might induce us to think they were not proper for the learned; neither indeed would I adviſe to eat them in too great a quantity, or to perſevere too long in the uſe of them. But in enumerating the evils we are expoſed to by ſtudy, it has been obſerved, that one of the moſt terrible of them is the ſtagnation and thickening of the bile, which theſe fruits are beſt calculated to prevent or cure; their juice is the mildeſt, moſt diſſolving, moſt pleaſant, moſt nutritious and fortifying of all the ſaponaceous juices. It keeps the bile in its fluid ſtate, removes

pen pretty well, though probably better in Switzerland, and are then a very grateful elegant fruit. In thoſe ſouthern countries, where the trees are indigenous, as in Perſia, Carolina, &c. peaches are highly refreſhing; they have a delicious cordial kind of fragrance, and are eaten when ripe, and when green (if baked or coddled with ſugar) freely without detriment. I never knew even what might be called rather an exceſs of them, attended there with any worſe conſequence, than that of a copious purging without a fever. When they do not ripen well in England, in chilly moiſt ſummers, (when our plumbs too are very unwholſome) and are crude and cold at the ſtone, I ſhould be cautious of indulging them in weak digeſtions, or in perſons naturally ſubject to colics from moſt vegetables, which ſome literary perſons are. The ſame obſervations will extend to nectarines, ſimilarly circumſtanced, theſe having been conſidered by many as ſmooth-ſkinned peaches. K.

obſtructions, encourages the periſtaltic motion of the inteſtines, diſſipates that melancholy which proceeds from obſtructions in the lower belly, and is particularly ſerviceable to that claſs of learned mentioned § 44. who are ſubject to inflammatory fevers, or ſuch as are liable to hectics, proceeding from want of moiſture, or from the putrid acrimony of the humours: theſe fruits are alſo moſt ſpecifically uſeful in the diſorders mentioned § 22, which ariſe from a corruption of the bile. When we are troubled with acidities; when the ſtomach and inteſtines are in too great a ſtate of relaxation; when the whole body is flabby, the blood too much diſſolved, and the ſtrength exhauſted, we are then to abſtain from them. Even thoſe perſons whom they are fit for, eſpecially the learned, whoſe ſtomach always requires care, will find it better to eat them between meals when the ſtomach is empty, than immediately after dinner; better to eat them alone, or with a little bread, than to mix them with other food; and above all, they will find it neceſſary to drink only water over them, which is the proper fluid for them to macerate in, whereas wine makes them hard and ſour.

§ 62. It is impoſſible to lay down general rules for the choice of diet; but every individual muſt regulate it by obſerving what agrees or diſagrees with him. Some people

people can digeſt meat rather than vegetables, which are apt to give them an uneaſy ſenſation at the pit of the ſtomach, and they therefore ought to uſe them with great circumſpection; others they agree with better than meat, which they cannot eat freely of without being troubled with anxieties, reſtleſsneſs, oppreſſion and fever. In general, vegetables are thought the moſt proper food for men of letters: Plutarch will not even allow them the uſe of meat, which he ſays impairs the underſtanding. In ſupport of this ſyſtem it may be urged, that we have inſtances of ſeveral philoſophers, famous for their talents and the extent of their knowledge, who always uſed to abſtain from meat; ſuch as Zeno, Plotinus, and Chryſanthus. The late M. Cocchi, a celebrated Florentine phyſician, has written a very intereſting diſſertation on this ſubject (*y*): but yet I think it neceſſary to obſerve, that it would be very injudicious to confine the learned entirely to a vegetable diet, which might be of real bad conſequence to many of them. Galen, Sethi, and Plempius, all agree in recommending river fiſh as one of the moſt wholſome aliments for ſtudious men, as being lighter on the ſtomach than meat. I have ſeen ſome men of learning who were always troubled with acidities when they eat bread, and

(*y*) Del vitto Pittagorio per uſo della Medicina. Fiorenza, 1744.

who were therefore obliged to eat it very ſparingly. Eggs diſagree with many perſons, and yet no reaſon can be aſſigned for it; the ſame thing may be ſaid of milk; ſo that it becomes abſolutely neceſſary to conſult the ſtomach in the choice of our diet.

§ 63. Although the moſt ſimple way of dreſſing victuals is the moſt wholſome, yet ſeaſoning is by no means to be excluded from the diet of the learned. The looſe fibres of their ſtomach, the action of which is not excited by motion, ſtand in need of ſome ſlight provocatives to get the better of their numbneſs; theſe are ſalt, ſugar, ſome mild aromatics, as cinnamon, nutmeg, and eſpecially thoſe more wholſome aromatics to be found in our gardens, thyme, marjoram, ſweet-baſil, chervil, fennel, and others of the ſame claſs: but thoſe ſtimulators are to be avoided, which being loaded with an oil or ſalt of an exceſſively acrid nature, irritate too powerfully, and continue acting for too long a time. All men of learning, in imitation of Horace, ſhould deteſt garlic, and abſtain from muſtard and pepper, which are impregnated with an almoſt cauſtic eſſential oil. They ought even to guard againſt a too copious and too frequent uſe of the mildeſt ſeaſoning, which ſhould never be conſidered as part of the common food; for every thing that irritates increaſes the circulation, wears out the organs, and ſhortens life.

§ 64. One

§ 64. One of the dietetic rules of moſt conſequence to health, and which becomes more particularly neceſſary to a weak ſtomach, is to avoid mixing a great variety of food together, and never to eat of more than two or at moſt three diſhes at one meal; thoſe who confine themſelves to one are ſtill more prudent. I know a worthy old man, who finding himſelf very ſickly at forty years of age, took a reſolution never to eat of more than one thing; he kept his word, and has now reached his ninetieth year in perfect health, ſtill enjoying the powers of his mind, and the quickneſs of his ſenſes. If we reflect a little on the ſurpriſing variety of meats our tables are covered with, and the number of different things we load our ſtomachs with in a ſhort time, we ſhall be apt to think few cuſtoms are more ridiculous: but if we obſerve the effects, we ſhall be convinced that none are more dangerous. Let us learn from Horace on this ſubject; his advice may perhaps be more agreeably received, and followed with more confidence, than that of a phyſician. "Let "us now conſider (ſays he) what are the ad- "vantages of temperance. Firſt, it always "brings good health with it. To be con- "vinced of it, we need only recal to our "minds ſome of thoſe plain meals which "have agreed with us ſo well: but when "we come to mix game and fiſh with ra- "gouts and roaſt meats, the ſofter food

"is changed into bile, and a viſcid phlegm "breeds a variety of miſchiefs in the ſto-"mach (*z*)."

§ 65. However wholſome and ſimple the food of the learned may be, if ſtill taken up with their ſtudies, they eat without chewing, a cuſtom I have before complained of; they deprive themſelves of one of the moſt uſeful helps to digeſtion. Nothing relieves the ſtomach ſo much as a proper maſtication; it increaſes the ſecretion of the ſaliva, which is one of the moſt powerful of the juices inſervient to digeſtion (*a*), and mixes it intimately with the food, the ſurface of which it extends by comminution, and makes the juices of the ſtomach penetrate into it with more eaſe: the diſſolution therefore of the aliments being quickly performed in the ſtomach, they ſtay there for a leſs time, are digeſted, and do not putrify: for the ſame reaſon the ſtomach is not irritated nor fatigued; all the remaining functions feel the effects of this firſt digeſtion well performed, and are executed with eaſe. There are two more advantages attending maſtication; one is, that we eat a leſs quantity of food, and are ſupplied with an equal ſhare of nouriſhment by it; the other, that it contributes greatly to the preſervation of the teeth: in ſhort,

(*z*) Accipe nunc victus tenuis quæ quantaque ſecum
Afferat, &c. Satyr. 2. lib. 2.

(*a*) Macbride's Experimental Eſſays, p. 15, 54, &c.

health

health depends ſo much upon it, that its advantages are ineſtimable; and we cannot inſiſt too ſtrongly upon the injuries too frequently ariſing from the neglect of it.

§ 66. As men of letters digeſt ſlowly, they ought not to eat too often; for there is great difference in the ſtate of a ſtomach wherein ſome half-digeſted food remains, which requires all the powers of digeſtion to finiſh its diſſolution, and one entirely empty, which has recovered its powers, and is well moiſtened with digeſting fluids ready to act upon freſh food. Whatever is taken into the ſtomach in the firſt ſtate diſturbs the digeſtion already begun, and cannot go through the firſt changes neceſſary to produce a good digeſtion; it is therefore of great conſequence to ſtudious men to avoid eating at improper times: three meals in the day are quite ſufficient for them; two very ſlender, and one a little more plentiful. I have ſeen perſons who had injured their ſtomachs and health by ſtudy, recover by adopting the method of life I had preſcribed to them, together with ſome directions with regard to the choice of their food, a detail of which would be improperly placed here. When they roſe in the morning they drank a glaſs of cold water, breakfaſted an hour afterwards, and ſtudied for four or five hours; they then took ſome kind of exerciſe during an hour at leaſt, and dined af-

ger having refreſhed themſelves a little. The hours immediately after dinner were employed either in a gentle walk, or in ſome ſocial duties which neither fatigued the body nor the mind; they ſtudied again for a few hours in the evening, and then took a very light ſupper, which circumſtance is of great conſequence to the learned on ſeveral accounts. The firſt is, that the blood being carried in greater quantity to the head while we are aſleep, it is dangerous to increaſe the fulneſs of the veſſels by a hearty meal before we go to-bed (*b*): the ſecond is, that the action of the nerves being diminiſhed during the time of ſleep, digeſtion, to which that action is neceſſary, will not be ſo well performed: the third is, that the ſleep of the learned being never very ſound, if a great quantity of food happens to be in the ſtomach at that time, it irritates and keeps the nervous ſyſtem in ſuch a ſtate of agitation, that reſt is entirely diſturbed; they are not quite awake, becauſe their ſtrength will not allow them to be ſo; neither do they ſink into ſleep, for they cannot enjoy that profound tranquillity which conſtitutes it; and this kind of ſtate fa-

(*b*) The fulneſs of the veſſels of the brain during ſleep is proved by a number of phænomena: a circumſtance occurs to us every day which manifeſtly ſhews it; I mean that grinding of the teeth we ſee in many children, and which ſome adults are even ſubject to in their ſleep; and it is always much ſtronger after a plentiful ſupper.

tigues

tigues them exceſſively, and injures their health. Theſe inconveniencies are prevented by light ſuppers, ſuch as Plato uſed himſelf to, which were ſaid to be pleaſant at the time, and continued ſo for the next day; ſuch as leave the body healthy, and the mind free: whereas, on the contrary, the head is incumbered by a plentiful ſupper, the body fatigued, the mind depreſſed, and unfit for ſtudy (c).

I have known ſome men of letters who have recovered their health only by taking a little milk at night. It may be urged by ſome, that it would be ſtill better not to take any ſupper. This is a cuſtom with ſome people whom it agrees with; but it ſhould by no means be adopted indiſcriminately by all the learned. Some of them have the ſtomach ſo exceedingly irritable, and the nerves ſo delicate, that if they ſtay a long time without taking any thing, the juices inſervient to digeſtion acquire an acrimony, which not being ſheathed by mixing with the food, irri-

(c) "Vides ut pallidus omnis
"Cœnâ deſurgat dubiâ? quio corpus onuſtum
"Heſternis vitiis animum quoque pregravat una,
"Atque affigit humo divinæ particulam auræ.
"Alter, ubi dicto citius, curata ſopori
"Membra dedit, vegetus præſcripta ad munera
"ſurgit." Hor. Sat. 2. lib. 2.

Theophraſtus has alſo obſerved, "that by plenti-
"ful eating and feeding much upon meat, reaſon
"becomes weak, the mind grows heavy, and a kind
"of ſtupidity comes on."

tates the ſtomach; and this irritation is ſufficient to diſturb ſleep.

§ 67. Thoſe who take pleaſure in eating may be apt to look upon theſe rules as ſo many auſterities, which have never been ſtrictly complied with; and which it might even be dangerous literally to adhere to: but they may eaſily be convinced to the contrary, from a great number of inſtances, which prove that a degree of abſtinence much more ſevere than that I have indicated, is the real method of preſerving health. Auguſtus, whoſe infirmities, as we have ſeen, were very analogous to ſuch as men of letters are liable to, may be propoſed as a model of temperance; for he confined himſelf to the ſmalleſt quantity of food (*d*). Paul the hermit, St. Anthony, Arſenius, and St. Epiphany, not to mention many other recluſe perſons whoſe long life is not ſo well atteſted, lived beyond a century, feeding only on bread, dates, roots, a little fruit and ſome water. Galen mended his bad conſtitution by exerciſe and very remarkable abſtemiouſneſs. Bartholius, the celebrated reſtorer of right in the fourteenth century, is, if I miſtake not, the firſt perſon who ever weighed his food; he reduced it to a very ſmall quantity, in order to preſerve his faculties equally diſpoſed at all times for ſtudy, to which he applied him-

(*d*) Minimi cibi erat. Suet.

ſelf with uncommon diligence (*e*). But one of the moſt ſtriking, as well as moſt uſeful examples, is that of Lewis Cornaro, a noble Venetian, of one of the moſt antient families, and of the number of thoſe which ſupplied the republic with moſt of its doges. At the age of five-and-twenty he found his ſtomach diſordered, was troubled with pains in his ſide, and felt the beginnings of the gout, and a hectic fever: notwithſtanding a variety of medicines, at forty years of age, he ſtill continued in a bad ſtate of health; he then laid aſide the uſe of medicines, and led a very abſtemious kind of life, confining himſelf to twelve ounces of ſolid food, and fourteen ounces of fluid every day, which was not more than the fourth part of a man's common food in the country where he lived. The effects of this diet, as related by himſelf, in a ſmall work intitled, The Advantages of a Sober Life (*f*), were ſo remarkable, that his infirmities gradually diſappeared, and were ſucceeded by

(*e*) An anecdote of the life of Bartholius has been preſerved, which is rather unfavourable to learning, and affords a too convincing proof of the dangers we are expoſed to of falling into a hypochondriac diſpoſition by intenſe application to ſtudy, and being affected with miſanthropy and moroſeneſs. He was inveſted with a conſiderable office of judicature, and condemned thoſe who were tried before him to death upon the ſlighteſt ſuſpicion: this made him ſo hateful to the people, that he was obliged to retire into the country to ſcreen himſelf from their fury.

(*f*) Luigi Cornaro diſcorſi della vita ſobria.

vigorous and ſound health, accompanied with a ſenſation of happineſs and ſatisfaction he had never before experienced. At ninety-five years of age he wrote a work upon the birth and death of man, in which he drew a very intereſting picture of his own life. "I find myſelf healthy and "ſprightly as at the age of five-and-twenty: "I write ſeven or eight hours in the day; "the reſt of my time I take a walk, join "in converſation, or bear my part in a "concert: I am chearful, eat every thing "with appetite; my imagination is lively, "my memory good, my judgment ſound; "and what is ſtill more aſtoniſhing at my "age, my voice is ſtrong and harmoni-"ous." He lived beyond one hundred years. Leonardus Leſſius, the learned Flemiſh Jeſuit, was ſo well pleaſed with Cornaro's method of living, that he tranſlated his Treatiſe on Temperance into Latin; lived in the ſame manner himſelf with the greateſt benefit; and compoſed, upon the ſame principles, a Treatiſe on Diet, in which he demonſtrates the advantages of a temperate life (*g*). Ramazzini has handed down to us The Hiſtory of Cardinal Sforza Pallavicini, who, after having ſtudied all day without taking any thing, contented himſelf with a very light ſupper in

(*g*) Leon. Leſſii Hygiaſticon, ſeu vera ratio valetudinis bonæ. Antwerp, 1563.

the

the evening (*b*). And to come nearer to our own times, the immortal Newton, who lived to a very advanced age, even when he was engaged in his moſt profound reflections, never took any thing but a little bread (29) and water, and ſometimes a ſmall quantity

(*b*) " Totam diem litterarum ſtudio ſine cibo la-
" giebatur, mox cœnâ modicâ ſumptâ ac ſtudiorum
" curâ ablegatâ, ſomno & virium reparationi noctem
" totam impendebat." De Litteratorum Morbis Diſſertatio. Opera omnia, p. 654.

(29) This particular regimen of the immortal Newton's is taken from a pretty current report; but gentlemen, who have had a perſonal knowledge of his real regimen, and been familiarly acquainted with ſir Iſaac's intimate contemporaries, are very clear that he lived, in general, like other regular and temperate men. Whether this regimen may be well adapted to other very ſtudious and ſedentary perſons, and eſpecially to thoſe engaged in ſuch profound and abſtracted reſearches, is another queſtion. This may conſiderably depend on the ſtate of health they are in, and the temperate courſe of life they have been habituated to. Bread, very good bread, may probably ſuffice to recruit the more ſolid, globular part of the blood: excellent water may ſupply the ſerous portion: and a moderate proportion of generous and genuine wine may contribute to a better nervous ſecretion, beſides its comforting and ſtrengthening ſo important and nervous a part as the ſtomach. Yet as nature certainly did not intend the human diet to be ſo very limited, we think a moderately hale, though ſtudious, perſon has no occaſion to ſubject himſelf to ſo whimſical a reſtraint of it. The ternary number however of theſe articles reminds me of the like number of ingredients, excluſive of the menſtruum, in Paracelſus's elixir, to procure either immortality or great longevity: the aloes being intended to cleanſe the body

quantity of Spaniſh wine; and during the whole courſe of his life, he never indulged in any thing elſe, except a little chicken. The famous M. Law, one of thoſe men who has exerted the powers of his mind in the ſtrongeſt manner, confined himſelf for ſeveral years, in order to keep his head free, and preſerve the quickneſs of his underſtanding, to one half of a chicken, and about a pound of bread every day, and drank nothing but water or watery liquors; (*i*) and indeed the choice of this ſort of drink may be conſidered as one of the moſt effectual means of preſerving health.

§ 68. Water is a drink nature has given to all nations, made it agreeable to all palates, and endowed it with the property of diſſolving the aliment. The Greeks and Romans conſidered it as a panacæa, and not without reaſon; for it is certainly a very efficacious medicine in all caſes where moiſture is deficient, when we are troubled with acidities, or when the bile has acquired too much ſharpneſs. Soft, freſh, clear ſpring water, which readily forms a lather

body and bowels; the myrrh to reſiſt all putrefaction of the fluids and ſolids; and the ſaffron to invigorate the heart and nerves; all which he determined muſt effectually prevent dying. We may readily conclude, he did not neglect taking his own immortaliſing noſtrum ſometimes, though he did not live above forty-ſeven or forty-eight years. K.

(*i*) Cheyney's natural Method of curing the Diſeaſes of the Body, &c. Part II. ch. ij. § 4.

with

with ſoap, boils vegetables well, and is proper for waſhing linen, is to be preferred to any other: when it has all theſe properties combined, it aſſiſts digeſtion very much; ſtrengthens, keeps up all the evacuations, prevents obſtructions, makes ſleep more calm, the head more clear, chearfulneſs more laſting, and the manners more gentle. If the effects of wine are compared with theſe, we ſhall find every part of the compariſon in favour of water.

§ 69. Wine acts as a ſtimulus; it irritates and increaſes the oſciſlation of the fibres, an effect which muſt neceſſarily ſhorten life, if too frequently produced; it is apt to turn ſour, and therefore adds to the acidities the learned are already ſubject to: it is indeed attended with another inconvenience peculiarly injurious to them, and which ſhould of itſelf be ſufficient to diſſuade them from the uſe of it: this is, that it derives the fluids powerfully to the head, and conſequently increaſes the diſorders of that part, to which ſtudy has already much contributed. Head-aches are ſeldom relieved and apoplexies never prevented, unleſs this drink is forbidden, the daily uſe of which rather interrupts than aſſiſts digeſtion in perſons whoſe ſtomach is weak. It has been often obſerved, that water-drinkers had the underſtanding more clear, the memory more ſteady, and the ſenſes more quick. Demoſthenes, G. Naudé, Tiraqueau,

queau, M. Locke, and M. Haller, never drank any thing but water: moſt of our greateſt men, as well as men who have lived to an advanced age, have drank but very little wine, for this liquor is very hurtful in all diſorders of the nerves, with which the learned are ſo much afflicted. They are indeed ſo unavoidably produced by ſtudy, that I make no doubt but that the love of the ſciences, which has prevailed ſo univerſally for theſe hundred years paſt, is one of the principal cauſes of the preſent increaſe ſo remarkable in diſorders of this kind (*k*); which might be more eaſily cured

(*k*) The diſeaſes of the nerves are much more frequent and various than they were ſixty years ago: this is a fact commonly known and generally complained of. Every body obſerves and aſks the reaſon of it. There are many to be alledged, and I ſhall here point out the chief of them. 1ſt. The love of the ſciences and cultivation of literature is more extended: we might ſay, as Cicero formerly ſaid of the gods, It is more eaſy to meet with an academician than a man. The number of printing preſſes continually at work in Europe, the infinite variety of writings daily coming from them, neceſſarily implies a great number of men, who although they may not all be learned, are yet more or leſs expoſed to the ſame diſeaſes as the learned men; among which the diſorders of the nerves are reckoned. So many authors give riſe to a number of readers, and conſtant reading produces nervous complaints; ſo that perhaps of all the circumſtances hurtful to the health of women, the chief has been the innumerable collection of novels publiſhed within theſe hundred years. From the earlieſt infancy to the moſt advanced old age, they

cured by proper diet, exerciſe, abſtaining from warm liquors and wine, than by any medi-

they read them with ſo much eagerneſs, that they are apprehenſive of a moment's interruption, take no exerciſe, and often ſit up very late to ſatisfy this inclination; by which their health is entirely deſtroyed. To theſe I might add the women who are turned authors, the number of which increaſes daily. A girl at ten years old, who ſits herſelf down to read, when ſhe ought to be running about, will be an hyſteric woman at twenty, and not a good nurſe as ſhe ſhould be. 2dly. The uſe of warm liquors becoming much more common, the dangers of which I have ſet forth in the cenſuing paragraph. 3dly. The increaſe of luxury, which brings on a more effeminate kind of life, both among maſters and ſervants, and has multiplied prodigiouſly the number of the ſedentary arts; the eſtabliſhing of which, however boaſted of, has deſtroyed at once both agriculture and health. I have ſeen in this country ſome villages, whoſe inhabitants were all employed in cooper's work, whoſe life was taken up in going to cut down the trees in the woods, making them into caſks, and carrying them to market; and in this diſtrict were found the handſomeſt, ſtrongeſt, moſt healthy men of the country, and who lived in the greateſt plenty. Thirty years ago ſome jewellers ſettled themſelves in this place, money became more common and ſeduced the people, the love of jewels prevailed, cooper's work was neglected, a ſedentary life ſucceeded to an active one, ſtrangers were hired to cultivate their lands; at laſt the new profeſſion failed alſo, and it is at preſent a part of the country where languid diſeaſes prevail moſt, where the men are degenerated, and from whence plenty and eaſe are fled, perhaps never to come back again, ſince they always leave thoſe countries in which the men are weak and indolent. Many people who waited on themſelves thirty years ago, now make themſelves be waited upon: many who then walked, now go on horſe-

medicines. I would not have it thought, however, that I entirely forbid the uſe of wine

horſeback; others who then went on horſeback, now ride in a carriage: the public carriages even are thought too rough for them; and we ſhall ſoon ſee the time, when the meaneſt artiſts will not travel without coaches well hung upon eaſy ſprings. People live more in towns than they uſed to do; the uncertain term of education is attended to; and, without knowing the ideas annexed to it, they come into towns for the education of their children, where health, and oftentimes virtue, is the forfeit. Inſtead of which the children acquire, 4thly. more paſſions: theſe are neceſſarily brought into play by the luxurious way of living prevalent in towns; they increaſe vanity, luſt, ambition, and jealouſy; injurious paſſions, deſtructive of health, and productive of all nervous complaints; which deſtroy the ſocial connections, friendſhip, and chearfulneſs ſo beneficial to mankind. 5thly. A fondneſs for high food, of a much more inflammatory nature, which muſt neceſſarily waſte the organs, bring on weakneſs, ſlow fevers, and all nervous diſeaſes. 6thly. A degeneration which is unavoidable. The diſorders of parents are transferred to the children. Our anceſtors began by going a little aſtray from the moſt wholeſome kind of life; our grand-fathers therefore were born weaker than our anceſtors, were more delicately brought up, and have begotten children ſtill weaker than themſelves; and we, of the fourth generation, have ſcarce any ideas of ſtrength and health, except among old men of fourſcore, or from hearſay. To bring them back again to us, would require a reaſonable conduct we cannot expect, or a few ages of barbariſm, we dare not even wiſh for. 7thly. The effects of ſecret (30) diſeaſes.

(30) Every truly reflecting reader will give a general aſſent to our author's juſt and pathetic obſervations throughout his preceding note. The evils are inconteſtable; and in every point of luxury, and its pernicious effects on the morals and conſtitutions of men, our domeſtic experience would furniſh us with more numerous and enormous

wine to men of letters; only I would not have it uſed as a common drink, but rather conſidered

enormous inſtances, than we hope have occurred to Dr. Tiſſot in Swiſſerland. But as he directly acknowledges our degeneracy is unavoidable, what, alas! can even policy, and much leſs phyſic effect, towards the extermination of it? though each perſon may contribute to leſſen it, in ſome meaſure, by avoiding the infection himſelf. The reducing ſuch evils conſiderably, conſiſts in the multitude of individuals, that have ſufficient virtue and fortitude to reſiſt them in their own lives and examples: and it is ſeriouſly to be apprehended, without the leaſt ſarcaſm, that the numbers among ourſelves will not amount to a multitude. Many who feel, who ſee the ill effects, and foreſee ſtill more, are zealous in decrying their cauſes, but make no oppoſition to the violent tyranny of faſhion. As Horace ſays, "virtutem verba putant." The truly good are too few, and generally of too little conſequence, to be imitated: and were their virtue corruptible by circumſtances adapted to that degree of luxury, which often diſpoſes to an unfeelingneſs for the miſery of multitudes, the good are eſſentially happy in not having attained ſuch depraving circumſtances. With reſpect to human life, on this ſmall ſpot of the planetary ſyſtem, (to ſay nothing of the inhabitants of the univerſe), and to all the viſible appendages of it, we have a continual evidence, that they are but for a ſeaſon, often a very ſhort one; and our religion aſſures us, that the inviſible things are eternal. As ſuch, they ſhould rationally challenge the preference of an immortal ſpirit: but alas! her ſenſations through many periſhable organs too frequently obſcure, or even efface, her ſublimeſt proſpect and appetite.

After all, the inveterate habit of degrading our own times, of preferring the former, and particularly the earlieſt times, inveſt it with an air of declamation. Part of our ingenious author's complaints here is conſiderably analogous to that moral or ſatyrical climax in Horace:

> "Ætas parentum pejor avis tulit
> "Nos nequiores, mox daturos
> "Progeniem vitioſiorem."

Now ſuppoſing there is more than a poetical reaſon for the extenſion of this climax, our extraordinary progreſſion in evil might be partly deduced from the numerous generations occurring ſince his days; and our ſurpaſſing foulneſs might be attributed to our exiſting much nearer the lateſt runnings of time, and thence proving more diſcoloured with its dregs. Into this calculation, however, we muſt admit the weight of the ſame writer's obſervation; That we are leſs forcibly impreſſed by what we hear, than by what we ſee, and perſonally experience. The wonder, upon the whole, is, that the extinction of paganiſm throughout Europe; the certain

ſidered as a medicine. We could not indeed find a more agreeable, or more efficacious medicine, in all caſes of much relaxation, weakneſs, or dejection: we ſhould then take it as M. Newton did, inſtead of ſolid food, to ſtrengthen ourſelves after uncommon fatigue; to enliven ourſelves after having been much exhauſted; and to ſupport ourſelves under afflictions. At all other times men of application ought to give it up entirely; neither need they be apprehenſive of breaking through an old cuſtom, for it is not attended with any danger; ſo that out of one hundred perſons who may ſuddenly leave off wine, we ſhall not find two who will ſuffer any inconvenience from it. When men of letters think wine neceſſary for them, they ſhould chuſe a ſtrong-

tain increaſe of learning, and a much more internal knowledge of the wonderful works of GOD, ſhould not have operated more effectually than they have, to the purity and exaltation of our minds, and conſequently to the further rectitude and improvement (rather than a degeneracy) of our manners. The ſerious fact with us ſeems to be, that too much infidelity in the Chriſtian revelation, and a conſequent contempt of the clear, the divine precepts it enjoins, (and which it did *once* perfectly exemplify) has depraved a majority of the great and opulent, which depravity has, from them, deſcended to too many of the people, who are willing to be thought as profound as their ſuperiors. Hence fraud and extortion have made larger ſtrides than uſual have; nor is there much hope of their abatement, until the great and wealthy are convinced, themſelves muſt prove, at the long-run, even temporally the worſe, for this vain and ſhort-ſighted policy. The learned Valetudinarians, to whom our author eſpecially addreſſes his treatiſe, ſeem the beſt qualified, by their ſuperior knowledge and erudition, and by the moſt habitual experience of their corporal fragility, to exemplify that eſſential purity of morals and of conduct, which our learned and philoſophical phyſician ſo pathetically recommends, towards the cloſe of his ingenious work. K.

bodied

bodied nouriſhing kind of wine, neither ſharp nor ſour, and which may ſtrengthen them without irritating; on the contrary, they ſhould carefully abſtain from all thoſe ſmall wines, which, as Van Helmont ſays, are rather a ſort of vinegar than wine, and therefore produce acidities, interrupt digeſtion, and irritate the nerves.

§ 70. There is another kind of drink not leſs hurtful to ſtudious men than wine; and which they uſually indulge in more freely; I mean warm liquors, the uſe of which is become much more frequent ſince the end of the laſt century. A fatal prejudice inſinuated itſelf into phyſic about this period. A new ſpirit of enthuſiaſm had been excited by the diſcovery of the circulation: it was thought neceſſary for the preſervation of health to facilitate it as much as poſſible, by ſupplying a great degree of fluidity to the blood, for which purpoſe it was adviſed to drink a large quantity of warm water. Cornelius Bontekoe, a Dutch phyſician, who died afterwards at Berlin, firſt phyſician to the elector of Brandenburgh, publiſhed in 1679 a ſmall treatiſe in Dutch, upon tea, coffee, and chocolate, in which he beſtows the moſt extravagant encomiums on tea, even when taken to the greateſt exceſs, as far as one or two hundred cups in a day, and denies the poſſibility of its being hurtful to the ſtomach. This error ſpread itſelf with

ſurpriſing rapidity all over the northern part of Europe; and was attended with the moſt grievous effects. The æra of its introduction is marked by an unhappy revolution in the account of the general ſtate of health at that time. The miſchief was ſoon noticed by accurate obſervers. M. Duncan, a French phyſician ſettled at Rotterdam, publiſhed a ſmall work in 1705, wherein we find, amidſt a great deal of bad theory, ſome uſeful precepts againſt the uſe of hot liquors (*l*). M. Boerhaave ſtrongly oppoſed this pernicious cuſtom; all his pupils followed his example, and all our eminent phyſicians are of the ſame opinion. The prejudice has at laſt been prevented from ſpreading, and within theſe few years ſeems to have been rather leſs prevalent (*m*); but unfortunately it ſubſiſts ſtill among valetudinarians, who are induced to continue theſe pernicious liquors, upon the ſuppoſition that all their diſorders proceed from a thickneſs of blood. The tea-pots full of warm water I ſee upon their tables, put me in mind of Pandora's box, from whence all ſorts of evils iſſue forth, with this dif-

(*l*) P. Duncan Avis ſalutaire contre l'Abus du Caffé, du Chocolat, et du Thé. Rotterd. 1705, 8vo. This work is not to be found now.

(*m*) Coffee and tea are forbidden in Sweden, and I am informed by the public news-papers, that a whole conſiderable province in Germany has voluntarily given up coffee, as the Engliſh colonies in America have left off drinking tea.

ference

ference however, that they do not even leave the hopes of relief behind them; but, on the contrary, by inducing hypochondriac complaints, diffuſe melancholy and deſpair.

§ 71. The ſophiſtry which has induced perſons of a weak habit to indulge in warm liquors, is eaſily deſtroyed. It is true indeed, that the circulation in them is ſometimes weak, ſlow, and languid; that their fluids are apt to ſtagnate and form obſtructions: but theſe accidents proceed from a weak tone of the veſſels, not from a denſity or inſpiſſation of the fluids, whoſe conſiſtence is rather deficient in ſuch perſons. If we bleed a ſtrong labouring man, and one who paſſes his life in his ſtudy, or any other valetudinarian at the ſame time, we ſhall find the blood of the firſt thick and of a deep red colour, ſometimes covered with a white hard kind of ſkin, ſimilar to that which is found in inflammatory complaints; the blood of the ſecond, will be broken down, watery, pale-coloured, and ſlimy: that part of the blood which in the former inſtance was formed into a ſtrong ſkin, makes in the other patient's blood nothing but a ſoft jelly; the labouring man ſhould therefore rather attenuate his blood, if ſuch a ſtate of the blood was a diſeaſed one, by many diluting liquors; the ſtudious man, on the contrary, ſhould endeavour to thicken the conſiſtence of this fluid,

fluid, and for that reaſon ſhould abſtain from drinking much of any liquor, eſpecially warm fluids, which increaſe the tendency to a dropſy, already produced, as I have before obſerved, by a ſtudious and ſedentary life. M. Duverney gives a ſtriking inſtance of this in the Memoirs of the Royal Academy *(n)*. The ſtomach more eſpecially is firſt made ſenſible of the bad effects of warm fluids, which are hurtful in ſeveral ways. This organ is ſwelled by the quantity we ſwallow, its fibres are too much diſtended by the bulk of fluid, and at the ſame time relaxed by its quality; ſo that it muſt neceſſarily fall into a ſtate of relaxation and weakneſs, and loſe the powers neceſſary for its functions: the food therefore remains too long in the ſtomach, and occaſions a diſagreeable ſenſation of weight; this we endeavour to get rid of, by drinking a freſh quantity of ſome diluting liquor, which ſweeping away the half digeſted aliments, gives a momentary relief, but in reality increaſes the cauſe of the diſorder. A ſecond bad effect of warm water, and in general of a large quantity of any drink whatever, is, that the juices inſervient to digeſtion are drowned in it, and thereby loſe their powers; and as they are of great ſervice in digeſtion, health muſt be impaired whenever their activity is blunted, more eſpecially as their office cannot be

(n) Of the year 1703.

ſup-

ſupplied by any other fluid; and that the moſt boaſted ſtomachics, ſeveral of which are frequently pernicious, can never be of ſo much ſervice as the ſaliva and the juices ſecreted in the ſtomach. Some people are apt to ſay, and perhaps ſome phyſicians, even that we ſhould drink a great deal to preſerve health; and particularly, that we cannot drink too much water: but we muſt be little acquainted with the laws of the animal œconomy, and the effects of a large quantity of fluid, to give ſuch advice. The relaxation of the ſtomach, the weakening of the digeſting fluids, the precipitation of the aliment before it is half digeſted, are the certain effects of this too prevalent cuſtom: and theſe inconveniences take place in a greater or leſs degree, according to the quality of the drinks. Thoſe which are ſwallowed hot or warm produce miſchiefs peculiar to themſelves, by deſtroying that ſoft mucus which lines the inſide of the ſtomach, the bowels, and in general all the hollow viſcera, and ſheathes their nerves from the too powerful impreſſion of food or any other bodies paſſing through them. When this mucus is once abraded by the continual waſhing of a warm drink, commonly ſaturated with ſome acrid particles, which render it ſtill more injurious, the nerves being bare, ſharp pains are felt after eating, unleſs we have been very careful in chooſing the ſofteſt kind of food. The inteſtines, deprived of their mucus in

the ſame manner as the ſtomach, violent cholics are brought on, and the miſchief ſpreading to the internal coats of all the ſmaller veſſels; the nerves, irritated in all parts, acquire that degree of mobility, which numbers are ſo unhappily (31) afflicted with.

§ 72. The

(31) Our author has certainly accumulated here the utmoſt that can be ſuppoſed in prejudice of this poor oriental leaf. It is certainly noxious in ſome caſes and conſtitutions; innocent, at leaſt, I really think, in many others, when moderately taken, for any exceſs, even of warm or of cold water, is bad; and it ſhould ſeem, from the letter of the eminent lawyer, which Dr. Tiſſot has the candor to ſubjoin to his note, that it may be uſed to medical advantage ſometimes. It were but impartial I ſhould think, and perhaps ſomewhat concluſive on the preſent topic, to enquire into the general health and longevity of the natives of the moſt populous empires in which it grows; and where the inhabitants drink ſtronger infuſions of it than ourſelves, and we may reaſonably ſuppoſe, not in leſs quantities. Credible writers, who have been in theſe countries, affirm, the inhabitants are ſtrangers to the gout, ſtone, and rheumatiſm, and very little ſubject to the ſcurvy. I cannot learn, that at Canton, a port the Engliſh are better acquainted with, than the inland part of China, where I ſuppoſe tea grows, palſies are more frequent than among ourſelves. On the contrary, a medical gentleman, who has been more than once at Canton, aſſures me, they have fewer palſies in proportion than the Engliſh. A captain of an Indiaman alſo, who has been there four times, very lately informed me, he never ſaw one paralytic in Canton: adding, that their porters, who drink tea commonly there, carry very heavy burthens, which, in that latitude, and with ſuch beverage, I own, greatly ſurprized me. The palſy nevertheleſs is a diſeaſe, which an European would be apt to think, ſhould

§ 72. The danger of theſe drinks is conſiderably increaſed, as I have before obſerved,

ſhould chiefly abound among the plentiful drinkers of ſtrong tea, and in ſuch a relaxing climate. Were people thus circumſtanced to attain, in general, the like ages with Europeans, it would be rather extraordinary for the more ſouthern latitudes in China, and could reflect no diſhonour on the properties of tea. I have not hitherto enquired particularly into the proportion of their aged people; but the repreſentations of ſuch being frequently intermixed in the painted papers, pictures, and images we import from thence, I am inclined to think they would not ſo familiarly repreſent what they rarely ſee.

It ſeems reaſonable to ſuppoſe, the infuſion of this leaf may agree leaſt with perſons of a very dilute blood, of lax fibres, and weak nerves. The more fragrant and high-priced tea may eſpecially diſagree with vapouriſh, hyſterick, and hypocondriacal perſons, to whom ſweet odours and fragrant medicines are generally offenſive. It is probably, from the quantity of its menſtruum, notwithſtanding the moderate ſtypticity of green tea, injurious in hæmoptoes, hæmorrhages from any part, in dropſies, palſies, and in ſome nervous cholics. From a parity of reaſon it ſhould not be injurious in diſeaſes, from a great viſcidity and ſpiſſitude of the fluids, nor from ſtrong and denſe fibres: except it is as univerſally bad for all diſeaſes, from whatever oppoſite cauſes, as the very worthy and ingenious biſhop's tar-water was good, and, in his own opinion, next to omnipotent. This exaggerated panegyric has certainly prevented it from proving as often beneficial as it might. It has never been ſuggeſted, within my knowledge, that tea was conducive to any acute, inflammatory, or eruptive fever, in which either cold or toaſted water would be deemed ſafe. I muſt be ſuppoſed conſtantly to mean no exceſs of it.

Some conſideration ſhould alſo be had to the ſugar, milk, bread and butter, toaſt or cake, very frequent-

ed, by the properties of the plants infuſed in them; the moſt fatal of theſe when too often

ly uſed with the tea. Theſe ſurely can have no tendency to render it either too ſtimulant and ſtyptic on the one hand, or too diluting and vapouriſh on the other.

This learned author, on the other hand, is not diſpoſed, with his uſual candour, to conſider tea in its favourable, or even palliative light, nor to give it the leaſt credit for any good conſequences attending the uſe of it, ſuch indeed as are clearly evident, and certainly not unwholſome. A conſiderable abatement of the inſalutary quantity of ſtrong heavy malt-liquor, of wine, and that frequently adulterated, and of inflaming diſtilled ſpirits, is one very happy conſequence of the introduction of tea. The manifeſt relief that it alſo affords after too much of theſe at a heavy indulging meal, which diſpoſes to oppreſſion and drowſineſs, is daily experienced by many; the ſecond or third diſh of but moderately ſtrong tea immediately rouſing and lightening ſuch perſons. Were it in fact the pernicious liquor our author repreſents, the uſe of it for 12 or 13 centuries in China and Japan were ſufficient nearly to have depopulated empires, ſo long indulging in the uſe, and perhaps in the exceſs, of it. Dr. SHORT, who diligently collected, from Kempfher and others, the natural hiſtory of this plant, and the natives manner of uſing it; and who was alſo very aſſiduous in analyzing it himſelf, informs us the Japaneſe powder their tea-leaves, and then, pouring boiling water on the powder, ſip them both up. He adds, that the Chineſe, who infuſe their leaves as we do, after they have drank off the infuſion, prepare the infuſed leaves for an evening ſallad, with ſugar, oil, and vinegar, and thus eat, as well as drink it with its utmoſt bad qualities. A dozen centuries, one would imagine, was ſufficient time to convince theſe nations of the teas worſt effects; and yet we find them, alas! obſtinately perſevering in the uſe of them. It is evident they have no emaſculating influence on theſe moſt ſalacious and populous empires.

But

often or too freely uſed, is undoubtedly the tea, imported to us ſince near two centuries paſt

But to return quite home, after this remote excurſion, having almoſt daily uſed it myſelf, and not ſeldom twice a-day, for the greater part of full ſixty years, and having ſeen many others who have uſed it as long, and ſome longer, without any perceivable ill conſequences, we find nothing deterring in it: though we are all apprehenſive, that fatalities will occur to a majority of us, before the termination of the preſent century.

In ſhort, the whole of this condemnation of tea reminds me of a remarkable circumſtance in Dr. Tiſſot's excellent advice to the people; in which, after enumerating the many diſadvantages of paſtry, as food for children, he concludes that article by obſerving, that the expence of ſugar is inconvenient for the peaſant: now the additional expence of tea, &c. to the ſugar, may prove inconvenient to people, a claſs or two above the peaſants. And as the Swiſs do not import this leaf at the loweſt price, and the doctor (to his ſerious honour be it ſpoken) writes like an unaffected patriot, I really think his motives from patriotiſm contribute at leaſt full as much to his invective in this caſe, as his medical judgment. However, as the Engliſh are great importers and conſumers of tea, without any very perceivable ill conſequence, it will become this annotator, as emulous of his author's patriotiſm, to offer this note, in humble extenuation at leaſt of his rigid decree againſt the uſe of this amuſing exotic. I acknowledge, at the ſame time, that a very worthy gentleman and great philanthropiſt, as a friend both to the political and phyſical health of Great Britain, has inveighed very ſeverely againſt the importation and uſe of it. But after all, the vehemence and prolixity of theſe ingenious writers, againſt a daily pint, or ſo, of tea, as we commonly drink it here, reminds me of the two doctors in Moliere, who are ſent to viſit M. Pourceaugnac, as a lunatic, and who exerciſe him with ſo many diagnoſtic interrogations and remarks at his morning's repaſt, that he tells them, like a man

paſt from China and Japan, which has ſo much increaſed diſeaſes of a languid nature in the countries where it has been introduced, that we may diſcover, by attending to the health of the inhabitants of any city, whether they drink tea or not; and I ſhould imagine one and the greateſt benefits that could accrue to Europe, would be to prohibit the importation of this famous leaf, which contains no eſſential parts beſides an acrid corroſive gum, with a few aſtringent particles (*o*), imparting to the tea when ſtrong, or

in his perfect ſenſes, he thinks they make too much fuſs and formality about a mouthful of breakfaſt.

I ſhall cloſe this note however with a ſerious objection to the too extenſive uſe of tea, and that is, to the too frequent conſumption of it by waſher-women, chair-women, and other laborious females in the lower claſs of life, who I think muſt pinch themſelves in their moſt neceſſary meal, to purchaſe a corrupt dirty ſort of tea. Now I imagine an infuſion of what we ſuppoſe very good in its kind, muſt be much leſs proper for them, at or after their hard work, than a moderate quantity of good malt liquor. Beſides, that this laſt makes no apology for introducing a cup of gin, or ſome fiery ſpirit, which tea does. As Dr. Tiſſot affirms, in a note p. 144. 'that ſome ſtates in Germany, the kingdom of Sweden, and the Engliſh Americans have renounced the uſe of tea, I muſt not omit to obſerve here, that this has certainly not reſulted from medical, but from oeconomical or political motives. K.

(*o*) A very able lawyer having read the firſt edition of this work, was kind enough to write me a very polite letter, containing an important obſervation, which he permitted me to communicate, and it may perhaps be uſeful to the public. "In the month of June "1765, I felt a ſlight heat of urine, accompanied "with pains I had never felt before; from the ac-

"count

or when the infuſion has ſtood a long time and grown cold, a ſtyptic taſte, ſlightly felt by

" count I gave of my caſe to M. le D. it appeared
" to him that I had the gravel, he therefore ordered
" me ſome turpentine pills, with an infuſion of pareira brava, and ſtick liquorice; this medicine made
" me void ſeveral fragments of little ſtones, appearing as if they had ſurrounded ſome ſmall nucleus,
" having one ſide concave, the other convex, with
" angles, &c. they ſometimes gave me great pain in
" paſſing, but moſt commonly were only juſt felt. I
" was generally coſtive, but towards the latter end of
" November the uſe of theſe medicines brought on a
" teneſmus, which made me ſuffer exceſſively. M—
" ordered me to leave off all my medicines, and to
" take glyſters, &c. Afterwards M. le D. whom I
" conſulted, preſcribed ſome ſoap pills and other remedies; and the teneſmus came on again. Having
" read in the Univerſal Hiſtory, that the Chineſe were
" never troubled with the gravel or ſtone, " owing
" as it was ſaid to the great quantity of tea they
" drank, which they uſed as a cold drink, without
" mixing any thing with it," I was reſolved to try the
" effects of this regimen. I had never uſed myſelf to
" tea, ſo that the drink was new to me. I took a
" quarter of an ounce of fine bohea tea, and pouring
" a quantity of boiling water upon it, ſuffered the infuſion to ſtand till it grew cold. I then poured it
" off clear, and drank three cups of it in the morning,
" at the diſtance of about an hour between each;
" two cups faſting, one after breakfaſt, and a fourth
" two hours after dinner. The firſt day, the only
" effect produced was a more plentiful diſcharge of
" urine; but the ſecond day I voided in the morning
" twelve large fragments, a nucleus of the ſize of a
" ſmall pea, with ſome gravel; and what gave me
" more ſatisfaction was, that the uſe of the tea kept my
" body open as in perfect health. I have ever ſince
" continued drinking this fluid with ſome interruptions, ſometimes leaving it off for eight days, laſt
" ſummer even for one month; the effect has always
" been the ſame, and ſo far from having my ſtomach

by the tongue, but which does not prevent the pernicious effects of the warm water it is drenched in. Theſe effects are ſo ſtriking, that I have often ſeen very ſtrong and healthy men, ſeized with faintneſs, gapings, and uneaſineſs, which laſted for ſome hours after they had drank a few cups of tea faſting, and ſometimes continued the whole day. I am ſenſible that theſe bad effects do not ſhew themſelves ſo plainly in every body, and that there are ſome who drink tea every day, and remain ſtill in good health; but theſe people drink it with moderation.

" hurt by it, my appetite and my digeſtion is better;
" and although my diet is regular, yet I am not ob-
" liged to tie myſelf down to it. I drink ſome white
" wine of the coaſt, mixed with three fourths of wa-
" ter, and moſt commonly a middling-ſized tumbler
" full is ſufficient for one meal. I abſtain from cheeſe
" and ſalt meats, &c.

" I am now within about two months of ſeventy
" years of age; a very little is neceſſary to procure me
" two or three plentiful ſtools: before I uſed myſelf
" to tea, a ſlight infuſion of polypody was ſufficient
" for that purpoſe. I generally uſed it when I had got
" a cold, and it agreed very well with me.

" I have given you this account, that you might
" endeavour to find out why tea has not had the ſame
" effect upon others who have tried it; perhaps they
" have not taken it in proper dozes, or perhaps they
" have not ſufficiently perſevered.

" In the laſt month, I repeated the experiment of
" putting ſugar into my tea three times; it increaſed
" my urine and kept my body open, but no frag-
" ments were voided."

This obſervation, which may be of ſervice, is not contrary, any more than the uſe the Chineſe make of tea, to what has been ſaid of the abuſe of it in Europe.

Beſides,

Beſides, the non-exiſtence of any danger cannot be argued from the inſtances of ſome few who have been fortunate enough to eſcape it.

§ 73. The effects of coffee differing from thoſe of tea, it cannot be placed in the ſame claſs; for coffee, although made with warm water, is not ſo pernicious for this reaſon, as it is on account of its being a powerful ſtimulus, producing ſtrong irritations in the fibres by its bitter aromatic oil. This oil combined as it is with a kind of very nouriſhing meal, and of eaſy digeſtion, would make this berry of great conſequence in pharmacy, as one of the bitter ſtomachics, among which it would be the moſt agreeable, as well as one of the moſt active. This very circumſtance is ſufficient to interdict the common uſe of it, which muſt be exceedingly hurtful. A continual irritation of the fibres of the ſtomach muſt at length deſtroy their powers; the mucus is carried off, the nerves are irritated and acquire ſingular ſpaſms, ſtrength fails, hectic fevers come on with a train of other diſeaſes, the cauſe of which is induſtriouſly concealed, and is ſo much the more difficult to eradicate, as this ſharpneſs united with an oil ſeems not only to infect the fluids, but even to adhere to the veſſels themſelves. On the contrary, when ſeldom taken, it exhilerates, breaks down the ſlimy ſubſtances in the ſtomach, quickens its action, diſpels the load and pains of the head, proceeding from interrupted di-

geſtions, and even clears the ideas and ſharpens the underſtanding, if we may credit the accounts of men of letters, who have therefore uſed it very freely. But let me be permitted to aſk, whether Homer, Thucydides, Plato, Xenophon, Lucretius, Virgil, Ovid, Horace, Petronius, to which I may venture to add Corneille and Moliere, whoſe maſter-pieces will ever be the delight of the remoteſt poſterity, let me aſk, I ſay, whether they drank coffee? Milk rather takes off from the irritation occaſioned by coffee, but ſtill does not entirely prevent all its pernicious effects, for even this mixture has ſome diſadvantages peculiar to itſelf. Men of learning, therefore, who are prudent, ought in general to keep coffee as their favourite medicine, but ſhould never uſe it as a common drink. The cuſtom is ſo much the more dangerous, as it ſoon degenerates into a habit of neceſſity, which few men have the reſolution to deprive themſelves of. We are ſenſible of the poiſon, and ſwallow (32) it becauſe it is palatable.

§ 74. The

(32) Our learned author lets coffee down much eaſier than tea, and perhaps finds it more agreeable to himſelf. Though I would gladly avoid much egotiſm, yet as every man can ſpeak more experimentally from his own ſenſations, than from thoſe of another, I hope to be pardoned for declaring, that I reliſh one cup of the beſt flavoured coffee rather preferably to tea, but rarely venture on a ſecond the ſame day; being ſtrongly of opinion, that many could not admit the ſame quantity of coffee daily, as they do of tea, with equal impunity. As for the nutrition from either

§ 74. The choice of air is alſo a circumſtance worth attending to, it extends its influence to the ſoul, as well as the body;

ther of them, this muſt very principally be referred to the milk, ſugar, &c. generally taken with them: but the little nouriſhment they afford will ſcarcely prove any rational objection to them, at leaſt in England, where our nouriſhing meals are not very ſlight in quantity or quality, with moſt who can afford them. Coffee ſeems reduced by roaſting, in ſome degree, towards a calx; and, if very highly roaſted, nearly to a *caput mortuum*; though I conceive that ſeparation of its eſſential oil is promoted by roaſting, which communicates its peculiar taſte and flavour to the infuſion. I conceive the raw berries would give very little of the ſame flavour to an infuſion, nor probably even by decoction; though I have never tried the laſt, which may cheaply and eaſily be done. On the whole, Dr. Tiſſot judiciouſly recommends this article, rather as an occaſional regale, than an habitual cuſtom: notwithſtanding which, ſome perſons have certainly indulged it much and long, without any viſible ill effects. I confeſs, for my own part, I ſhould be more apprehenſive of nervous and paralytic ſymptoms from an equal quantity of coffee than of tea; the firſt I ſuppoſe, would prove more appropriate to moiſt, the latter to dry, temperaments. By the way, the difference of flavour in the Arabian and American coffee is very remarkable, that of the latter exciting the notion of ſome torrified grain or *Puls*. I have not been able to diſtinguiſh it from the flavour of an infuſion of burned, or roaſted rye. Whether this be owing to ſome indiſcoverable diverſity in their different ſoils (the latitude of Arabia and ſome parts of America being certainly the ſame) or whether the flavour of the Arabian is better preſerved by their mode of drying it, or by the ſhade of taller trees, with which they are ſaid to defend the coffee-ſhrubs from the more vehement and exhaling rays of the ſun, are queſtions we ſubmit to the diſcuſſion of our curious readers. K.

a wholeſome air, ſays Hippocrates (*p*), gives underſtanding; the air of Bœotia and Thrace made the mind heavy, *Bœotum in craſſo jurares aere natum*; that of Athens enlivened it, and Plato ſays, that Minerva had choſen this place to bring up the wiſeſt of the human race (*q*). It is incumbent upon the learned to chuſe as much as poſſible, a temperate, pure, and dry air, which is very beneficial to the lungs, encourages the circulation, and ſtrengthens the fibres: cold and dry air is tolerable; but damp air is very dangerous, it increaſes the diſorders incident to men of letters, relaxes, obſtructs perſpiration, produces catarrhs, rheumatiſms, and palſies (*r*). The learned are like Auguſtus, and all other delicate perſons, who cannot well bear the extremities of either cold or heat, eſpecially the latter, which are moſt obnoxious,

(*p*) De Morbo ſacro, N° 17.

(*q*) In his Timæus, at the beginning; and in another place he ſays; "It is certain that the ſituation "of countries contributes not a little to make men "better or worſe." De legib. lib. 5.

(*r*) M. Pellegrini, an eminent phyſician, and profeſſor of anatomy at Venice, who has publiſhed a very accurate and elegant tranſlation of the Avis aux Peuples, with ſome very uſeful additional remarks, has given an obſervation which ſhews the danger of damp rooms; it is of a woman in the prime of life, and in very good health, who was always ſeized with an apoplexy whenever ſhe ſtaid in a damp place, which went off when ſhe removed into a dry air; and which never returned after ſhe had determined to quit that damp apartment. Avertimenti al popolo, p. 44.

as they cannot ſo eaſily guard againſt them as againſt the extremities of cold. In the ſummer-time Milton was ſeized with a depreſſion of ſpirits, nearly reſembling idiotiſm. M. Dodart ſpeaks of a young lad eight years old, of a remarkably ſtrong genius, whoſe memory failed during the *dog-days*, and who recovered it again when the air had been cooled for a few days (*s*); and M. Lanciſi, the famous phyſician to the two pope's Innocent XI. and Clement XII. declared in a letter to his friend Cocchi, that at a time when the great heats prevailed, if the air was not refreſhed by ſome gentle breezes, he was unable either to think or write (*t*). Intenſe cold irritates the nerves and brings on convulſions in thoſe perſons whoſe nerves are very ſuſceptible; the learned ſhould therefore avoid the two extremes. They are not indeed always at liberty to chooſe their place of reſidence, nor is it in the power of every one to go to Baiæ or Alexandria in ſearch of the moſt wholeſome air. The country, which is the place beſt calculated for thinking, and where we breathe the pureſt air, is not always convenient for men of letters, who are often obliged to fix themſelves in towns for many reaſons; they ought at leaſt to pick out as wholeſome a lodging as poſſible; their rooms

(*s*) Hiſtoire de l'Academie Royale des Sciences, Ann. 1705, p. 72.

(*t*) Lanciſi ad Cocchi, p. 47.

ſhould be lofty, light, expoſed to the wind in the ſummer, and to the ſun in winter; they ſhould fix themſelves at a diſtance from places which emit unwholſome exhalations, ſuch as ſlaughter-houſes, the ſhambles, tanner's yards, &c.; they ſhould take great care frequently to renew the air of their rooms; and this is one reaſon why rooms with chimneys where the air is conſtantly renewed are more healthy than thoſe which are furniſhed with ſtoves (*u*); another very important advantage they have over them, is, that our feet is not ſo much expoſed to cold as they are with ſtoves.

§ 75. Cold in the feet, which we are liable to whenever we take no exerciſe, and are not near the fire, is hurtful to weak habits by bringing on heavineſs in the head, ſore throats, pains in the breaſt, and ſtubborn colds: it prevents perſpiration, interrupts digeſtion, occaſions violent cholics, and contributes greatly to diſturb ſleep. I have directed ſome learned men to warm the ſoles of their feet every night at the fire, before they went to bed, even till they felt pain, and by this means have brought on ſleep, after they had taken the moſt powerful opiates to no purpoſe, a kind of medicine generally pernicious to them. Others have found benefit from wearing conſtant-

(*u*) Breviter & ſine tergiverſatione audeo definire, ſeſſionem multo ſalubriorum eſſe ante luculentum focum, quam in hypocauſto. Plempius De togat. valet. tuend. p. 57.

ly to the ſoles of their feet ſome gently ſtimulating plaſters. The blood is ſo apt to be carried up to the head in learned people, that they ought by no means to neglect any reaſonable method of preventing it. Some have been ſo bold as to tie a napkin dipt in cold water round their heads to enable them to continue ſtudying for a longer time; but this is a dangerous experiment which I by no means adviſe. It may be very proper, however, generally to keep the head bare or very lightly covered, and if we do not wear our hair, to waſh it every morning with cold water, as well the ears, face, and neck (*x*). When we feel our head ſuddenly filled or heated, it is the beſt way to remain for ſome moments perfectly motionleſs, not even allowing ourſelves to ſpeak; we may afterwards take a little cold water, and eſpecially abſtain from ſtudy for ſeveral hours.

§ 76. The care all ſtudious perſons ought continually to take to divert the fluids from the head, ſhould prevent them from giving way to ſleep after dinner, which produces a contrary effect. If the cuſtom has once taken root, and that we cannot poſſibly bear up againſt it, we ſhould at leaſt make the ſleep as ſhort as poſſible, and imitate Auguſtus, whom I have already often propoſed as an example to men of letters; when he found himſelf ſleepy, "he quieted himſelf for a ſhort time, in

(*x*) Vid. Celſus De medicinâ, lib. 1. cap. 4.

"his

" his cloaths, only covering his feet and " holding his hand before his eyes (*y*)." Before we go to ſleep, it is proper to looſen the collar of the ſhirt, and untie the garters.

§ 77. The uſe of tobacco is another pernicious cuſtom we could hardly have ſuppoſed men of letters would have been addicted to. " Tobacco, ſays the lord chan- " cellor Bacon, has been lately introduced " amongſt us, and is a ſpecies of henbane " which diſorders the brain juſt as opium " does." It acts upon our ſenſes in the ſame manner as ſtrong liquors do, ſo that thoſe who begin to ſmoak are affected as perſons who have drank too much; in proceſs of time the effect ceaſes becauſe we uſe ourſelves to ſmoaking as we do to drinking. The cuſtom has been brought to us from ſavages, who having no other employment but that of hunting for their food, were delighted to find a relief againſt the tireſomeneſs of indolence, and which helped them to kill time. It could never have been imagined, two hundred years ago, that we ſhould one day have been under the neceſſity of warning the learned of

(*y*) Sueton. in vit. C. O. Auguſt. c. 82.

I have ſpoken of the inconveniencies of ſleeping after dinner, in a letter to M. Haller, Epiſtol. de variolis, apoplex. et hydrope. This cuſtom, in uſe among the ancients, was neceſſary for them, to reſt during the heat of the day, in thoſe very hot countries, where they roſe early in the morning.

ſome

ſome countries, of the great dangers they expoſe themſelves to by this practice.

Although tobacco may not be hurtful to every body, yet I may venture to affirm, that it is certainly pernicious to moſt people, leſs however to ſome than to others, and that it is not neceſſary for any one. Smokers will undoubtedly exclaim againſt this doctrine, as drunkards would againſt a diſcourſe on the bad effects of wine; but it is ſufficient for me if I can prevent young people, who are not already ſlaves to this cuſtom, from contracting it, and open the eyes of thoſe who are entruſted with the education of youth, upon this point, which may appear on examination more deſerving of their attention than it has hitherto ſeemed to be. This method of uſing tobacco (*z*) was firſt brought into Europe in 1560, by John Nicot, envoy from France to Liſbon, who learned it, if I miſtake not, from a Dutchman lately arrived from Florida. The ſmoke of the plant contains a very acrid ſalt, and a narcotic ſulphur wrapped up in the oily part (*a*). The irritation produced by this ſalt on the ſalivary

(*z*) All this article, which appears to me out of its place, is taken from my letter to M. Haller, De variolis, apoplex. et hydrope. It was not in the firſt edition of this work, but the French tranſlator having inſerted it in his, I have been obliged to follow his example.

(*a*) We know that the oil of tobacco applied to a wound is a ſpeedy and deadly poiſon, although the leaves are ſometimes uſed to advantage.

glands

glands being ſtill increaſed by the heat, brings on a plentiful diſcharge of ſaliva, which being conveyed into the ſtomach, occaſions, in perſons who are not uſed to it, vomitings and violent purgings; theſe effects ceaſe gradually, but ſmoakers generally obſerve, that the body is kept open by this cuſtom; which they look upon as wonderfully beneficial, whereas it is no more ſo, than it would be to have an evacuation after taking an ounce of manna (*b*). It may be aſked, whether this bitter purgative fume does not deſtroy the ſolitary and other worms, as we are every day told. I cannot take upon me to deny this particular, but at the ſame time know of no facts which prove it; and this advantage, if it even does exiſt, is much leſs certain than the miſchiefs ariſing from this acrimony, the chief of which is a too plentiful ſalivation, with all the diſorders attending it. In the firſt place, ſmoaking certainly increaſes the ſecretion of the ſaliva, and if we ſmoak much it cannot all be ſwallowed, ſo that it muſt be ſpit out, and fails afterwards in the digeſtion, becauſe no more is ſecreted for the reſt of the day; the organs, accuſtomed to this irritation, perform their office but imperfectly when that ceaſes, ſo that we ſee people who ſmoak do not ſpit any

(*b*) The purgative property of the tobacco is proved by the good effects ſometimes produced, and the violent operations at other times brought on by glyſters of the decoction, or ſmoak of this plant.

more

more after they have laid aſide their pipes. 2dly, The powers of the ſtomach and inteſtines are impaired by the too frequent ſtimulus, the appetite is blunted, the ſtomach and inteſtines become ſluggiſh, digeſtion is at length diſturbed, and great ſmoakers are attacked nearly with the ſame kinds of diſeaſes as hard drinkers are. 3dly, The humours are even infected by the acrimony of the ſalts of the tobacco. 4thly, As ſmoaking makes one ſwallow a great deal of fluid, this quantity of drink becomes a cauſe of diſorders more or leſs dangerous according to the quality of the liquor.

The narcotic principle brings on other miſchiefs ſtill more alarming; it increaſes the diſorders of the ſtomach as all anodines do; it occaſions confuſion and pains in the head, vertigos, anxieties, lethargies, and apoplexies, of which we have but too many examples. It is evident from hence how dangerouſly we deceive ourſelves in ſmoaking to guard againſt apoplexies. I have myſelf known ſeveral perſons, and heard of a great many more, who have been carried off by this diſeaſe, at the very time they were uſing this famous preſervative, which is certainly rather a cauſe than a prophylactic of apoplexies. I know of no great ſmoaker who has ever lived to a very advanced age. De Heyde regretted very much a learned phyſician who killed himſelf in the prime of life by a too free uſe of tobacco; and it is not in the leaſt aſtoniſhing

ſtoniſhing to ſee a liſt of the moſt grievous diſorders proceeding from this cauſe, and atteſted by authors of veracity. Van Helmont, Tulpius, the learned burgomaſter of Amſterdam, and many others, have known apoplexies brought on by this habit. The phyſicians of Breſlaw have reported to us the ſhocking inſtance of the two brothers of Sileſia, who having challenged one another who ſhould continue ſmoaking for the longeſt time together, died both apoplectic, one at the 17th, the other at the 18th pipe. The Ephemerides curioſorum naturæ, mention an epilepſy; De Heyde and Tulpius, very bad diſorders of the breaſt; P. Borelli, a jaundice; the late M. Werlhof, the gout; M. Van Sweiten, very troubleſome diſorders of the liver; M. de Haller, a conſumption, &c. all proceeding from this cauſe. I have known the moſt violent head-ach and a burning heat in the mouth and throat come on after ſmoaking a few pipes to carry off the tooth-ach, which was ſtill more violent after the uſe of this remedy.

Muſt we therefore conclude, that the ſmoaking of tobacco is of no uſe? At the ſame time that I abſolutely condemn it as a daily cuſtom, I do not ſay but that it may ſometimes prove an uſeful medicine. In relaxed and watery habits, this ſmoak, drawn through a long narrow tube, to the ſides of which the narcotic oil may ſtick,

as

as ſoot to a chimney (*c*), may ſometimes ſtimulate the ſalivary glands when too tardy, may quicken the action of the ſtomach and inteſtines, and diſſipate ſome diſorders proceeding from too great a quantity of ſerum. It has alſo been ſometimes uſed with ſucceſs to decreaſe a too plentiful ſalivation, when produced by an exceſſive relaxation of the ſalivary canals, upon which this ſmoak acts, as ſharp ſtomachics act upon the ſtomach when entirely relaxed. It may likewiſe have relieved ſome aſthmatic perſons when conveyed into the lungs with the air we breathe, by looſening and cauſing an expectoration of that viſcid phlegm which obſtructs their bronchiæ. I have read, that ſome fat people have been relieved by it; muſt not this effect have been produced by its decreaſing their appetite, rather quickening the action of their fibres, and ſharpening their humours? M. Hoffman has known violent cholics cured by it, but does not ſay whether this was by its acting as a purgative or an anodyne (33).

§ 78. Tobacco

(*c*) The Perſians, and ſome of the Turks, uſe pipes ſeveral feet long, they ſmoak ſitting or reclined after their manner, and part of the ſtem of the pipe paſſes through water. Ruſſel's Natural Hiſtory of Alep. p. 12. The ſmoak is by this method exceedingly ſoftened, and loſes almoſt all its acrimony; ſo that neither the taſte nor the ſmell of the tobacco remains.

(33) Neither the particular kind of cholic, nor the manner of uſing tobacco in it, being aſcertained here, I have been reduced to ſuppoſe, the cholic cured by it, muſt have been the nervous cholic, or cholic of

§ 78. Tobacco in powder with which we fill our noſtrils every inſtant, is alſo in ſome meaſure dangerous. The olfactory nerves are always irritated by it, and I know not of what uſe this irritation can be to a man in health. The ſtrongeſt men who uſe it too freely, are troubled with vertigos; and it affects weak perſons ſo powerfully, that it makes them even faint away; and I know a great number of women who are ſeized with a fit of the vapours if they take a pinch of ſnuff faſting. At length

of Poictiers, ſo very ſimilar to the belly-ach of the American iſlands, within the tropic, and occurring ſometimes in the more ſouthern colonies of North America. I have, ſome time ſince, ſeen a very exact inſtance of it near London, where it was attended with the almoſt inſeparable ſymptom of extreme and acutely painful coſtiveneſs, and the frequently nervous conſequence of great debility, a very partial uſe of the limbs, which ſometimes amounts to a nearly total diſuſe of them, eſpecially of the hands and fingers, for a while. In this caſe however the patient gradually, though ſlowly, recovered their uſe. Now in ſuch extreme coſtiveneſs, the fume of tobacco forced into the inteſtines by a pipe, or a decoction of ſome injected, by way of clyſter, ſeldom or never fails of procuring a paſſage, when many other purging medicines have failed of effecting it. We were not reduced to uſe it any way in this caſe. The caſtor oil, expreſſed from the ricinus, the ripe berries of the palma Chriſti, and the Bath waters were of great ſervice at the decline of the diſeaſe. The tobacco is certainly a violent remedy even here, but is juſtified by the axiom of, duro nodo durus cuneus.—The relief it affords in ſuch a caſe muſt certainly depend on the evacuation it excites. Tobacco has a hot, ſtupefying, or narcotic quality; but I think it has very little title to the appellation of an anodyne. K.

the ſenſe of ſmelling is blunted, and all the nerves fall into a kind of numbneſs. The moſt alarming ſymptoms have been produced by a maſs of ſnuff collected in the ſtomach (*d*), and I am thoroughly convinced, by ſome recent obſervations, of the truth of what has been ſaid with regard to ſnuff, that it weakens the memory and hurts the ſight, which is itſelf a very ſtrong motive for perſuading men of letters to lay aſide the cuſtom of taking it (34).

§ 79. Theſe

(*d*) Trilleri Diſſertat. de tabaci ptarmaci abuſu, opuſc. t. 1. p. 221. This learned phyſician has very thoroughly ſhewn the dangers attending the uſe of this powder, which, he ſays, has been forbidden throughout all Spain under heavy penalties, by an arret of the 17th Dec. 1760. Many other ſovereigns, ſuch as the king of Pruſſia, the emperor of Turkey, the grand duke of Ruſſia, the pope, and the king of England, had endeavoured to prohibit the uſe of ſnuff in their reſpective dominions.

(34) Our author's general cenſures of tobacco are certainly juſt; and his limitations of it, in a medical way, very judicious; to which we may add, that thoſe who are already inſlaved to the habit of it, in any manner, are leſs likely to be relieved by a medical adminiſtration of it. To ſpeak from my own experience, I had ſmoaked, though never immoderately, for above twenty years of my life, being firſt compelled to it by very acute and even chronical paroxyſms of the tooth-ach. But above as many years paſt, I was alarmed with a ſecond touch of a vertigo from a ſingle pipe, which I immediately broke, and have never ſmoaked ſince. I have found chewing more effectual than ſmoaking againſt the tooth-ach, for a plain reaſon which I have mentioned in the Advice to the People, edit. 3d. p. 154. This habit of chewing

§ 79. Theſe are the chief remarks to be made upon the cauſes of the diſeaſes incident

chewing pig-tail, (the mildeſt I could procure), amuſed me for a time, even out of the tooth-ach, but it making me ſickiſh and dry as it were at ſtomach, after a large diſcharge of ſaliva; and having made me change colour and turn faintiſh at another time, many years ago, I have never uſed it in any manner ſince, having very ſeldom taken ſnuff. Both theſe ſymptoms are obſerved by Dr. Tiſſot to attend the uſe of it. I have known a few, and indeed but a few, great ſmoakers who have attained long life. It requires ſtrong vital principles, I imagine, to ſubdue that manifeſtly deleterious and antinervous quality of it, which is univerſally experienced on its firſt and ſecond uſe.

Tobacco is much hotter, and greatly more acrid than opium, of which ſome people, by familiarizing their conſtitutions gradually to it, arrive at ſuch extraordinary doſes. I knew a woman abroad, who took an ounce of ſolid opium every week ſhe could procure it, and had neither reſt nor comfort without a very conſiderable doſe. Such an internal doſe of tobacco in ſubſtance, though very ſeldom repeated, would very certainly have been mortal. Thoſe habitual ſmoakers, who are of a full and moiſt temperament, and yet ſpit but little with chewing or ſmoaking, and drink only ſmall liquors with it, are likely to be the leaſt injured by it, and probably the likelieſt to be relieved, in a few caſes, under a medical regulation of it. I am much leſs ſurpriſed at the generally pernicious habit of ſwallowing opiates, than of chewing and ſmoaking tobacco; the former pretty certainly imparting eaſe, ſerenity, and even inexpreſſible pleaſure, with a manifeſt addition of ſpirits and alacrity to ſome perſons, of which there have been ſeveral inſtances; but the ſame effects have not reſulted from the latter in any one inſtance I have ſeen, heard, or read of: it apparently only removing the uneaſineſs the conſumers of it feel, from what would very generally be, a

ſalutary

cident to the learned, and the methods of preventing them; but when once the diſorders are come to ſuch a heighth as to require the aſſiſtance of medicine, they muſt be treated according to the nature of the ſymptoms, and the rules preſcribed by art againſt the particular kind of diſeaſe the patient may be affected with; but it is not the deſign of the preſent diſſertation to point out theſe; we ſhould, however, pay ſome regard to the kind of life the learned are engaged

ſalutary diſuſe of it. A room, ſaturated with its fumes, muſt leſſen the neceſſary quantity of ſimple and elaſtic reſpirable air in it, and thus becomes very unwholeſome to ſuch as make no uſe of the herb itſelf. The ſlow and gradual advances to a continual familiarity with it, and the very ſmall quantity of its ſubſtance conveyed inwardly by a pipe or two, are the circumſtances which prevent it from deſtroying many ſpeedily. In like manner we find many very noxious ſubſtances, the ſolution of ſublimate for inſtance, become even medicinal, at firſt in a very ſmall doſe, and gradually in larger doſes, in certain caſes: and I have known (not directed) twenty-five grains of turbith mineral given to puke and affect a patient, who, from his long and intimate acquaintance with mercury, was in no-wiſe affected by twenty grains of that violent preparation of it; which quantity would certainly endanger, and might deſtroy, a perſon never accuſtomed to mercurials. It is upon the ſame principle, that ſome people attain a terrible capability of not being ſoon poiſoned by a dozen pipes or more daily. It ſerves many indeed as a laſting apology for their being better qualified to liſten than to converſe: and I have heard one great *fumeur*, who made a facetious apology for his almoſt inceſſant ſuction of a pipe, which was, that he thought a man looked like a beaſt without one. K.

in, which has always ſome influence on the health, and requires a choice of medicines ſuited to the ſtate of the patient.

§ 80. When a learned man is really ill, the firſt thing to be recommended to him is entirely to leave off ſtudy; however hard the injunction may be, it is abſolutely neceſſary (*e*), and it is hurting him very much to be in the leaſt remiſs upon this article. He muſt even forget that there are ſuch things as books and ſciences, his ſtudy ſhould always be locked, he ſhould give himſelf up to eaſe, chearfulneſs, and country diverſions and become what nature has made men, an huſbandman and a gardener: there is no other method of drawing him away from his reflections, and while they are indulged he cannot get well. If it were poſſible to diſcover a medicine which could ſuſpend the thinking powers for a time without danger, it would certainly be a ſpecific againſt the diſeaſes of the learned.

§ 81. When they are exceſſively weak, they ſhould ſometimes be put upon a milk diet, if they can be made to digeſt it. The famous Houdart de la Motte, who had always an infirm ſtate of health, was obliged to confine himſelf for a long time to a vegetable and milk diet (*f*). At other times it is neceſſary,

(*e*) Difficile eſt longum ſubito deponere amorem,
Difficile eſt: verum hoc, qua cubet, efficias.
Una ſalus hæc eſt, hoc eſt tibi pervincendum.
Catull. 82.

(*f*) Année litteraire. 1768. t. 1. p. 53.

with

with a very ſoft kind of nouriſhment, to blend the uſe of ſtrong cordial wines, provided the breaſt ſtill remains free, and that there is no ſlow fever; ice-water for common drink is an excellent ſtrengthener, agreeing very well with the weak ſtomachs of the learned.

§ 82. The bark is a very efficacious medicine, when the ſtrength is exhauſted from intenſe application; it reſtores digeſtion, ſtrengthens the veſſels, gives a proper conſiſtence to the blood when diſſolved, encourages the ſecretions, eſpecially perſpiration, gives power to the nerves, and ſuppreſſes their irregular motions. One of our beſt geometricians, when he found himſelf fatigued with calculations, uſed to recover his ſpirits by drinking a glaſs of the decoction of the bark he had always by him.

A new kind of wood exported from Guiana, has of late been uſed, it is called the Bitter [35] Wood of Surinam, or the

(35) This wood of quaſſi, or bitter wood of Surinam, is not as yet an officinal here; nor have I ever ſeen it. The cortex eleutheriæ, frequently called alſo caſcarilla, I have known to be a conſiderable aſſiſtant to the bark in ſome tedious intermittents; improving, in my opinion, both its flavour and its ſtomachic virtues; eſpecially where ſweets do not diſagree, this bark being conſiderably fragrant, and ſtill more ſo on its being burnt ſlowly. The republic of medicine has an agreeable proſpect of being ſtill further obliged to Dr. Tiſſot, for communicating the event of the obſervations and experiments he is making on this medicinal wood. K.

Wood of Quaſſi: it is extremely light, and yet very hard; of a pale yellow colour, without ſmell; and of a bitter ſharp taſte; it is more bitter than the bark, and does not ſeem more diſagreeable; the eſſential difference between them, both with regard to their taſte and their properties, is that the quaſſi has not the aſtringency which the bark has; with reſpect to their effects, I could wiſh to have a greater number of obſervations on the quaſſi than I can have been able to pick up ſince I uſed it, in order to make the compariſon with any degree of certainty; but from the experiments already made, I am inclined to think, that this new wood is perhaps preferable to the bark, in the intention of ſtrengthening a weak ſtomach, recovering the digeſtion, diſſipating flatulencies, and relieving coſtiveneſs proceeding from debility, which makes it particularly uſeful to the learned; and the bark is ſtill a better medicine in all febrile, gangrenous, purulent, worm, and convulſive caſes (*g*).

§ 83. Cold bathing, the effects of which I have before ſhewn to be analagous to thoſe of the bark, is alſo a very proper me-

(*g*) I am obliged to M. Schinz, an eminent practitioner at Zuric, for firſt making me acquainted with this excellent medicine, on which we find a diſſertation in the collection publiſhed by Linnæus, under the title of Amœnitates Academicæ, t. 6. and I hope it will ſoon be introduced into common practice.

dicine

dicine; it ſtrengthens the ſtomach, muſcles, nerves, and even the ſoul itſelf, and enables them to ſupport freſh fatigues. I have known ſeveral young perſons throw themſelves into the cold bath after being wearied and depreſſed with ſtudy, who always found upon coming out, a peculiar ſtrength of mind, and a freſh diſpoſition to ſtudy. If weakneſs is exceſſive, the bath will rather do hurt than good; its firſt action is repelling of the humours upon the internal organs, and the benefits of it depend upon the reaction of thoſe organs; if they have not the power to re-act, the effect is more hurtful than advantageous.

The ancients were ſo well acquainted with the good effects of cold water, that they ſeldom ſuffered a day to paſs without bathing in it, however buſy they might be; it is alſo certain that they frequently uſed warm bathing, but they did it for reaſons which men of letters cannot alledge. If the learned ever experience much benefit from theſe ſort of baths, it muſt be in peculiar caſes of heat, inflammation, and dryneſs; but in general they are not calculated to anſwer the principal intentions of cure in diſorders proceeding from exceſſive application: Auguſtus found himſelf hurt by them, and his phyſician Antonius Muſa ordered him the cold bath with complete ſucceſs, notwithſtanding his weakneſs. I have often been conſulted by men who had impaired their health by the labours of the mind, and who have recovered it by

temperance, reſt, and particularly by the cold bath, the effects of which were very evident.

§ 84. Frictions are alſo of much uſe, and not to be neglected. If every morning, while in bed lying on our backs with the knees a little raiſed, we rub the ſtomach and belly with a piece of flannel, we increaſe the circulation in all the viſcera of the abdomen, prevent obſtructions, diſſipate ſuch as have already begun to be formed, promote the diſcharge of the bile, facilitate the ſecretions, and reſtore the digeſtive powers. If we rub the whole body, perſpiration is encouraged, and the circulation quickened; which indeed is ſo much accelerated by ſtrong frictions continued for a long time, that a burning fever may be brought on, ſo that in ſome degree they may ſupply the want of exerciſe. The ancients who were ſenſible of all the advantages reſulting from this practice, not only uſed it as a remedy, but alſo as a daily method of preſerving health. Unfortunately the cuſtom had been almoſt entirely aboliſhed, till the Engliſh phyſicians began to reſtore it at the end to the laſt century. They cannot be of more ſervice to any than they are to the learned; but before they uſe them, I would adviſe them to read what Celſus and Galen have written upon this ſubject.

§ 85. How uſeful ſoever the medicines I have ſpoken of may be to the learned, mineral

mineral waters are not leſs beneficial. There are many ſorts of them, and they may all have their advantage in peculiar caſes; but thoſe which are moſt proper, and moſt commonly of uſe in the firſt ſymptoms of the diſeaſes incident to the learned, are the ſimple, acidulated, and ferrugineous waters (*b*). The Author of nature, who has endowed them with great powers, has alſo ſcattered them widely abroad; ſo that there are few countries where they are not to be found, many where they frequently occur, and freſh diſcoveries are daily made of them. Among the moſt efficacious may be reckoned the waters of Egra, in Bohemia; of Tonſtein, (*i*) in the archbiſhopric of Cologn; of Seltzer, in the electorate of Treves; of Peterſtal, in Alſatia; of Amphion, or Evian, in Savoy (*k*); of Rolle, on the borders of our lake, in a happy ſituation; of Lauſanne; and to mention now the ſtronger, the waters of Forges, in Normandy; of M. Caſalbigi, at Paſſi; of Ribas, in Spain; of Tunbridge, in England;

(*b*) Some phyſicians call them alcaline, a name very contrary to that of acidulated; both names are juſtifiable; but I ſhould rather prefer that of alcaline, as it ſeems to agree better with the effects of the medicine.

(*i*) Acidulæ Antoninæ.

(*k*) Inſtead of the acidulated waters of Evian, the tranſlator has made me recommend the hot ſulphureous waters of Aix in Savoy; I correct this miſtake, becauſe it is a dangerous one.

of Altwaſſer, in Silesia, on the confines of Poland; of Medewi and Wickſberg, in Sweden; of Schuwalbach, in Franconia; of Spa, in the principality of Liege; and of Pyrmont, in the county of Waldeck: but the waters of Seltzer, Schuwalbach, and Spa, are moſt in uſe, and drank all over Europe. They always get the better of obſtructions in the viſcera of the lower belly, recover the digeſtive powers, reſtore ſleep, and make perſpiration eaſy; hence we may ſee how beneficial they muſt be to men of letters. If to the advantages derived from themſelves, we add thoſe which follow from leaving off application entirely; from the breathing free and open air; from the exerciſe we take, and the diet we follow at the ſame time, we ſhall readily account for the ſurpriſing cures effected by theſe waters, eſpecially if they are drank on the ſpot; firſt, becauſe they are then more powerful; ſecondly, becauſe the journey, the change of objects, and diſſipation, do as much good as the waters; for it is well known, that ſome of the learned have been cured of the hypochondriac diſeaſe, by a journey undertaken merely with a deſign of viſiting ſome libraries at a diſtance. The waters, however, ought never to be taken without the advice of a phyſician; for the more powerful they are, the more capable are they of doing miſchief when improperly applied. The learned Morhof, having

ing had ſome cauſe of uneaſineſs in an advanced age, which brought on a cachochemic habit of body, determined to take the Pyrmont waters, contrary to the advice of his phyſician, and died on his return home (*l*).

§ 86. When the learned are attacked with acute diſeaſes, we muſt not forget that the patient we have to deal with is a ſtudious man, and therefore ſeldom has the degree of ſtrength we find in others. It has already been obſerved, that they were leſs diſpoſed to inflammatory complaints, the diſorders of ſtrong, plethoric, and healthy men, than to putrid diſeaſes, which proceed from bad digeſtions and obſtructions in the viſcera of the abdomen. Bleeding, therefore, is leſs ſuited to their complaints than purging is (*m*), for it lowers them too much; and I have remarked, whenever it was indiſpenſably neceſſary to take ſome blood from men of letters, whoſe health has been injured by ſtudy, that they were almoſt always ſeized with ſymptoms of a nervous hypochondriac diſorder. Gaſſendi's death is ſaid to be owing to bleedings, which deprived him at once of his ſtrength. M. Geſner, profeſſor of natural philoſophy at Zuric, one of the men who does the greateſt honour to Switzerland, having been bled at Paris for a ſlight fever, in the prime

(*l*) Behren's Select. Diætetic. p. 480.
(*m*) Rammazini, p. 656.

of his life, continued for ſix months in a languor he could not recover from, without much difficulty (*n*). Another phyſician of my acquaintance ſhared the ſame fate; and all practitioners in cities, where there are men of learning, have undoubtedly had many opportunities of being convinced of this important truth; the bad effects of an improper bleeding preſcribed to a weak man are not ſo ſoon repaired as we may imagine.

§87. Purging is better (36) adapted to ſtrike at the root of diſorders incident to the learned than bleeding; it is a kind of medicine which acts in the moſt ſucceſsful manner with them; and it is difficult to get fairly rid of their acute diſeaſes without this evacuation: indeed it is their favourite medicine, and they are ſo much prejudiced for it, that they are even apt to uſe it needleſsly when in health: coſtiveneſs, to which they are ſubject, occaſions an uneaſineſs not to be relieved but by ſome evacuations; and the medicines which operate in this way appear to them extremely valuable; and indeed there would be no impropriety in uſing

(*n*) Vita Gefneri, p. 2.

(36) Gentle purging will be ſtill more preferable to bleeding, where the ſtudious patient is conſiderably advanced in years, rather depreſſed for his time of life, and not ſanguine. If bleeding ſhould be thought quite neceſſary, very elderly people bear the loſs of it better, by cupping, from the ſuperficial and capillary veſſels, than from the aperture of a conſiderable vein. K.

them,

them, provided they choſe ſuch as are mild and ſtrengthening. The lord chancellor Bacon recommends rhubarb, which he uſed indiſcreetly (*o*); but I ſhould prefer aloes, before preſcribed by Celſus, as it ſpoils the digeſtion leſs than any other purgative; it ſeems to act as a ſoap, and ſupply the place of the bile, the virtue of which is often loſt among the learned. If, on the contrary, the bile is too active, which makes them ſubject to continual colics, becauſe their nerves are conſtantly irritated, the mildeſt laxatives are to be employed, and the pulp of caſſia, freſh drawn, is the moſt ſuitable medicine in this caſe. But whatever purgative they may chuſe, I cannot caution them too much againſt the danger of recurring to it too often: theſe frequent purgings accuſtom the body to be badly nouriſhed, and it conſequently becomes weak; beſides, the inteſtines become ſtill more indolent, and at length will not perform their functions; the fine mucus lining them is deſtroyed, and leaves the nerves bare; from whence proceed vio-

(*o*) "Non poſſum probare inſtitutum Verulamii, "qui, ut in ipſius vitâ traditur, ſex aut ſeptem die- "bus ante cibum rhabarbaro uſus eſt, ut immune "corpus excrementis redderet. Satius fuiſſet, ſi cor- "rectâ paulatim victus ratione, ab omni remedio ab- "ſtinuiſſet. Sic enim excrementis, ipſoque adeo re- "medio purgante, toties aſſumendo, facile carere, vi- "tamque haud dubie longius producere potuiſſet." J. G. Bergerus de Commodis Vitæ ſobriæ. § 25.

ſlent and frequent colics, obliging the patient to confine himſelf to the very mildeſt regimen, from which he cannot ſwerve in the leaſt inſtance, without ſuffering the moſt excruciating pains.

§ 88. Whenever men of letters are attacked with a fever, we muſt attend to the ſtate of their brain, which is eaſily confuſed; ſo that the ſlighteſt fever often throws them into a delirium, the more dangerous, as it takes off from the influence of the nerves on the body, and therefore increaſes weakneſs, and diſturbs the criſis, which is always leſs perfect, in proportion as the nerves are more diſordered. The nerves of ſtudious men ſuffer from the time they begin to be indiſpoſed; they have immediately pains in their head; the day-light, the noiſe, company, and every thing wearies them; and I have often ſeen a ſimple fit of an ephemeran ague accompanied and followed with debility and other ſymptoms, ſufficient to alarm any one, who, not knowing the true cauſe, might be induced to conſider them as ſymptoms of a putrid diſorder.

§ 89. The convaleſcences of the learned are always tedious, their ſtrength recovers itſelf but ſlowly, the mind is particularly ſenſible of the effects of the diſeaſe; and I have hardly ſeen one of them in ſuch a ſituation, who has not complained of his memory and the weakneſs of his head, ſtrongly

marked

marked in his face by a fooliſh appearance. If they are incautious enough to return to their ſtudies before they are perfectly recovered, they lay the foundation of the moſt dangerous diſeaſes; the eyes, the head, and the ſtomach will be firſt attacked, and all the animal functions will feel the ſhock. The influence of intenſe application upon the nerves is ſo ſtrongly marked, that I have often known reflection, or even an engaging book, ſuſpend the operation of a purgative. The learned, by neglecting to take care of themſelves in a convaleſcent ſtate, are expoſed to the hazard of never being able to recover their health completely, and making themſelves incapable of any great literary undertaking: it is playing a very loſing game, to ſacrifice the good of a whole life to the ſatisfaction of giving one's-ſelf up a few days ſooner to the object of one's paſſion; but the paſſions never conſider the odds; and a paſſion for ſciences is perhaps the moſt blind of any.

Watchfulneſs fatigues learned convaleſcents more than any thing elſe; they recover their ſleep with much greater difficulty than other patients; ſometimes cordial wines act very favourably in this caſe; they produce the beſt effects, eſpecially with ſuch as are not uſed to them; they act as narcotics, and are not attended with the ſame inconveniencies: on the contrary, they reſtore the powers of the ſtomach, weak-

ened

ned by the quantity of warm liquors the diſorder has made it neceſſary to drink; they bring back the ſtrength, and raiſe the ſpirits.

§ 90. Whatever care the learned ought to take of their health, one of the moſt important is, to avoid making themſelves ſlaves to it: they are accuſed of giving way to cuſtom eaſily, and a rigid obſervance of cuſtom is a real ſlavery (37). I have known ſome men of letters ſo ſubjected to their regimen, that their mind was entirely dependent on their body. What indeed can we think of a man who is rendered unfit for any thing by his dinner being put off for an hour, the heat of his ſtove being altered, or the preciſe hour of his going to-bed or getting up interrupted? I remember

(37) This is a neceſſary and judicious qualification of the exact and reſtraining regimen Dr. Tiſſot has precedingly directed to his ſtudious and ſedentary readers, who will vary in years and conſtitution from each other. He admits, in other words,—"qui vivit "medicè, vivit miſerè:" and doubtleſs a very rigorous and invariable adherence, even to proper rules, may be attended with a ſolicitude but little favourable to health; eſpecially as a fortuitous neglect of rule will aggravate that ſolicitude into the diſtreſs of the tranſgreſſor. Celſus we know even enjoins a diverſity of living,—"nunc pleniùs, nunc parciùs," &c. but we muſt not omit, that he is there adviſing people in perfect health. A pretty general conformity to directions, and habitual temperance, will ſuffice for ſuch of the objects of our author's advice, as are not ſick, nor very infirm: but any deviations from it ſhould neither be exceſſive nor frequent. K.

to have read, ſeveral years ago, a work written to ſhew that men of letters ought to indulge themſelves in all ſorts of conveniencies: a man who ſuffers is certainly not able to ſtudy with attention; but the real way for men of letters to indulge in all their conveniencies, is to uſe themſelves to curtail their wants.

§ 91. I have expoſed as circumſtantially as poſſible, the cauſes, ſymptoms, preſervatives, and cure of the diſeaſes produced by intenſe application, you will find however, that the taſk is not completed, and you will be ſenſible, gentlemen, that I have omitted the moſt certain preſervative of health, I mean that contentment of mind proceeding from integrity of manners: an upright conduct is the parent of chearfulneſs, and cheafulneſs is the promoter of health. The man of letters finds an example for himſelf in Horace's deſcription of the happy man:

"Mens conſcia recti in corpore ſano."

Wiſe and learned have long been ſynonimous terms; and virtue and knowledge was learned in the ſchools; a man of learning and a profligate was a being unknown:

"Quid muſæ ſine moribus vanæ pro-
"ficiant?"

Men were deſpiſed who employed themſelves

ſelves only in ſearching after what was good and honeſt, ſaw what was right and did what was wrong; and conſequently deprived themſelves of that moſt pleaſing of all ſatisfactions ariſing from the remembrance of a good action; the effect of which, as of all agreeable ſenſations, is to impart vigour, facility, and regularity to all the animal functions, which are the true foundations of ſound health: whereas melancholy, the conſtant attendant of remorſe, relaxes the fibres, diſturbs the digeſtions, deſtroys the powers, and leads on to a conſumption. I cannot call to mind, without emotion, the pangs of ſome men, who having abuſed the talents beſtowed on them, have been ſeized with horrors difficult to deſcribe, in the laſt moments of an ill-ſpent life. In the contrary, I reflect with infinite pleaſure on the calm and comfortable end of ſuch men, as "have lived," according to Pliny's advice, "through the "whole courſe of their life, as one would "wiſh to live upon a ſick-bed;" and who have enjoyed, even to the brink of the grave, in an advanced old age, the ſatisfaction of an irreproveable conſcience, and preſerved the quickneſs of their ſenſes and the powers of their underſtanding. The celebrated hiſtorian Paulus Jovius, having enquired with ſurpriſe of Nicol. Leoniceni, one of the moſt learned men in the fifteenth century, by what art he had

preſerved, during the ſpace of ninety years, a ſound memory, perfect ſenſes, an upright body, and a vigorous health, was anſwered by that phyſician, that it was the effect of upright manners, tranquility (38) of mind, and temperance (*p*).

§ 92.

(38) Our excellent author's laſt advice to the objects of his benevolent treatiſe, may be contemplated as a *medicina ex ſanis*, or the phyſical and preſervatory operation of the mind, in its ſoundeſt ſtate, upon the body. It is in truth moſt eſſentially vital, by extending its influence, beyond the preſent fugitive life, into an unlimited one, of proportionable happineſs or miſery. And as the conduct, and the examples which he recommends, of preſerving a conſcience void of offence, and a diſpoſition incapable of injuring, muſt either extinguiſh, or greatly moderate our natural dread of death, it is the moſt probable means of retarding it, unto the utmoſt period of its inevitable acceſs, that neceſſary condition of our finally total immunity from it. To live as free, as ſerene, and as contented as we can, it ſeems indiſpenſible that we ſhould be, at leaſt very nearly, content to die. An exemption from the fear of dying is conſidered, by an excellent judge of human life, as a ſupreme characteriſtic of liberty and of wiſdom too—"Quem neque mors, neque vincula terrent."—Many inſtances are recorded of thoſe who have anticipated death, by their exceſſive horror of it, and confirmed the reality of life—"ne moriare mori."

In truth, did not daily experience convince us of its being certain fact, a rational being would think it

(*p*) "Vividum, inquit, ingenium perpetuâ vitæ innocentiâ, ſalubre vero corpus hilari frugalitatis præſidio facile tuemur." Petr. Caſtellani Vitæ Medic. &c. Leoniceni was born at Vicenza in 1428, and died at Ferrara in 1524, after having taught and practiſed phyſic upwards of ſixty years in that place.

para-

§ 92. It would be needleſs to enter into any farther particulars, I ſhall therefore con-

paradoxical to affirm, that ſuch a majority of the human ſpecies, as profeſs to believe the immortality of the ſoul, and an endleſs ſtate of retribution, ſhould live in a manner that muſt bitterly aggravate their natural dread of dying: yet this, alas! we find too generally to be the caſe, even while they behold the hourly, the momentary ravages of death; its frequently inſtantaneous ſeizures, during the vigour and flower of life, perhaps in all the virulence of guilt, and when it certainly was the leaſt apprehended. It is no wonder if people, ſo circumſtanced, perceive either the ſlow or ſpeedy approaches of the deſtroyer, with all that accumulated diſmay and horror, which our author profeſſes to have ſeen, and which he ſo pathetically repreſents. While the behaviour of good men, who are ſeriouſly the only wiſe, at the ſame period, exhibits a highly contraſted ſcene to all thinking minds, and may well animate them to a ſimilar life, in hopes of dying the death of the righteous.---Such a departure muſt affect their worthieſt ſurviving friends, leſs with a pungent affliction, than with a kind of exulting melancholy, which, to a juſtly contemplating mind, muſt be a very conceivable ſtate.

The ſtudious, the learned, and ſcientific, to whom Dr. Tiſſot particularly devotes his work, will feel an additional ſolace, towards that criſis of the great ſeparation (which terminates in eternal exiſtence) from the proſpect of an evident ſolution of the many doubts, and a clear diſplay of ſuch former difficulties, as their moſt aſſiduous and macerating ſtudies, with their utmoſt penetration, in this dark ſtate, could not ſatisfactorily inveſtigate. I confeſs I ſhould be apt to infer, that any man, who had lived moderately happy during ſeventy or eighty years, muſt have very little curioſity, if the ſatiety of a life, in which he was likely to learn, or to diſcover, little new or more, did not perceivably ſteal in upon him. This would certainly be the caſe much oftner than it is, if our inter-

conclude with a reflection, which may perhaps be neceſſary to prevent any ſophiſtical concluſions being drawn from this work. It repreſents indeed a picture of diſeaſes brought on by exceſſive application; but it muſt not be argued from hence, that

intervening terrors, from conſciouſneſs, did not often prevent it. Upon the whole, however, there is ſo much reſemblance between this ſuppoſed longevity of good and temperate men, and the ſpirit and turn of a very pleaſing epigram I have read, that I hope I ſhall be pardoned for concluding theſe notes with it, and a little verſion of it. The inſtance of innocence, which it exhibits, ſeems indeed more than human; notwithſtanding which, there certainly occur everywhere many different advances to innocence, and ſeveral different, however diſtant, approaches towards perfection. K.

Pax boni viri.

Jam numerat placido felix Antonius ævo
Quindecies actas * Primus Olympiadas.
Præteritoſque dies et tutos reſpicit annos.
Nec metuit Lethes jam propioris aquas.
Nulla recordanti lux eſt ingrata graviſque;
Nulla fuit cujus non meminiſſe velit.
Ampliat ætatis ſpatium ſibi vir bonus; hoc eſt
Vivere bis, vitâ poſſe priore frui.

The peace of a good man.

Behold how ſweetly good Antonius bears
The weight, deducting five, of fourſcore years:
Peaceful reviews that guiltleſs ſtretch of time,
And, near the Stygian wave, he ſports in rhime:
Of thrice nine thouſand ſuns obſerving none,
Which conſcience may regret, or memory ſhun.
What old, what bliſsful, age the good attain!
Who twice enjoy each day, and every ſcene.

* Primus Antonius, or the ſame words reverſed, was the name of this good and happy man.

I con-

I condemn ſtudy as a dangerous thing, or that I am deſirous of raiſing a diſguſt to it. The great queſtion concerning the utility of the ſciences has been much canvaſſed, and I am far from having any deſign of engaging in the conteſt; for even if it ſhould be true, which is not however my opinion, that upon the whole they do not contribute to the happineſs of ſociety, it can hardly be denied, that learning adds to the happineſs of the perſon who poſſeſſes it, provided he has acquired it without the expence of his health, or the neglect of his ſocial duties (*q*).

Although I have given many inſtances of the danger of early application, I have not meant to inſinuate that the earlieſt days of childhood ſhould be conſumed away in total idleneſs; this is not at all my opinion. I think children are ſuſceptible of acquiring ſome degree of knowledge in the firſt years of their life (*r*); but we ſhould certainly give them theſe impreſſions in a different

(*q*) "Adoleſcentiam alunt, ſenectutem oblectant "ſecundas res ornant, adverſis ſolatium præbent, "delectant domi, non impediunt foris, pernoctant "nobiſcum, peregrinantur, ruſticantur." Cicero Orat. pro Archia.

(*r*) "Quamlibet parum ſit, quod contulerit ætas "prior, majora tamen aliqua diſcat puer ipſo anno, "quo minora didiciſſet. Hoc per ſingulos annos "prorogatum in ſummum proficit: et quantum in "infantiâ præſumptum eſt temporis, adoleſcentiæ "acquiritur." Quinctilianus de Inſtit. Orat. lib. 1. cap. 1.

manner

manner than we have done hitherto. It ſeems particularly a thing of great conſequence, that the early education of children ſhould be directed with a view to the profeſſion they are deſigned for: the education of young men intended for ſtudy ſhould be differently managed from that of others, and their faculties ought to be taken more particular care of in infancy. Let us ſuppoſe ten children of nine years old, deſigned for different profeſſions; I could wiſh that the one deſtined for the ſciences ſhould be the leaſt knowing at that age; at twelve years, the age when Paſcal and Newton were yet unacquainted with Latin, he ſhould begin to gain the aſcendency, and at ſixteen he ſhould leave them far behind. In condemning thoſe who give themſelves up to ſtudy with paſſionate imprudence, it was not my deſign to blame thoſe who cultivate the ſciences with wiſdom and propriety; for if we are expoſed to the moſt cruel diſorders by giving up every thing to the love of letters, on the other hand we expoſe ourſelves to ſhame by remaining in ignorance.

The Ynca Atabaliba having found out the ignorance of Fr. Pizarre, conceived an invincible contempt for him; which circumſtance appears to me an argument ſufficient to prove the neceſſity of education.

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